Public Utilities

Volume 58 No. 2 July 19, 1956

Westinghouse

Will Put the Power of the Political Telecasts Behind "Housepower"

THE BIGGEST TELEVISION AUDIENCES IN HISTORY will be tuned to the CBS-Westinghouse network during the Presidential campaign . . . and Westinghouse is planning to do a major promotion in support of the Edison Electric Institute's "Housepower" program during those telecasts.

Millions of Americans will be told about the need for adequate residential wiring in this way.

"Housepower" will be promoted regularly in commercials by Betty Furness at the conventions.

"Housepower" will be the subject of the commercials on two special telecasts on the Sundays before the opening of the two conventions.

"Housepower" will be featured in a commercial during one of the political debates which will also be sponsored by Westinghouse.

All this will appear on 175 television stations and 212 radio stations.

"Housepower" will be promoted again during election night telecasts.

"Housepower" will be publicized on Studio One July 30.

Television audiences alone during the conventions, will reach as many as 55,000,000 a day and more than 81,000,000 different people in a week.

Westinghouse is doing this promotion because it believes the "Housepower" campaign can be one of the best things that has happened for the utility industry.

Westinghouse Electric Corporation

***WATCH WESTINGHOUSE**—WHERE BIG THINGS ARE HAPPENING FOR THE UTILITY INDUSTRY*

REPRINTS OF ARTICLES
(200 or more copies)
available on orders received within 30 days after publication date.
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PUBLIC UTILITIES FORTNIGHTLY . . stands for federal and state regulation of both privately owned and operated utilities and publicly owned and operated utilities, on a fair and nondiscriminatory basis; for nondiscriminatory administration of laws; for equitable and nondiscriminatory taxation; and, in general—for the perpetuation of the free enterprise system. It is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by contributors.

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FEATURE SECTIONS

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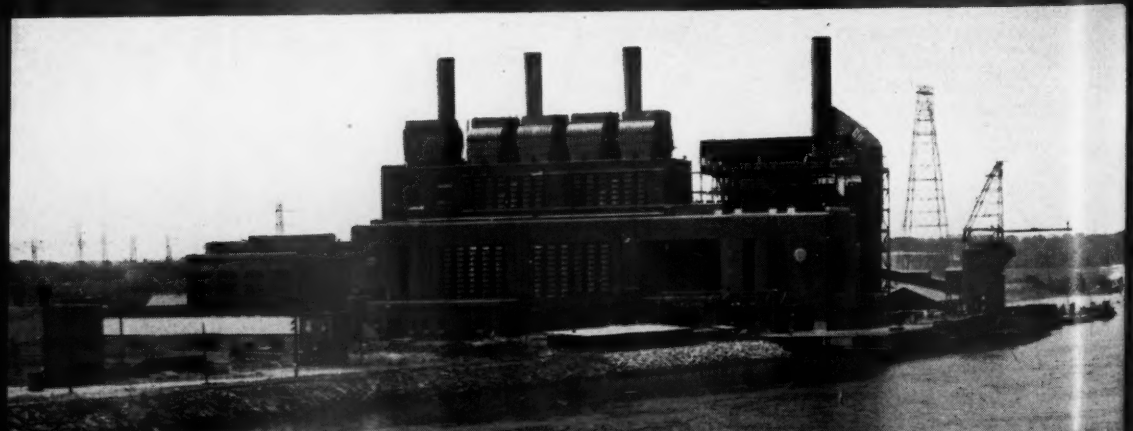
Modern Central Stations Serving America

NEW B&W RADIANT BOILER FOR

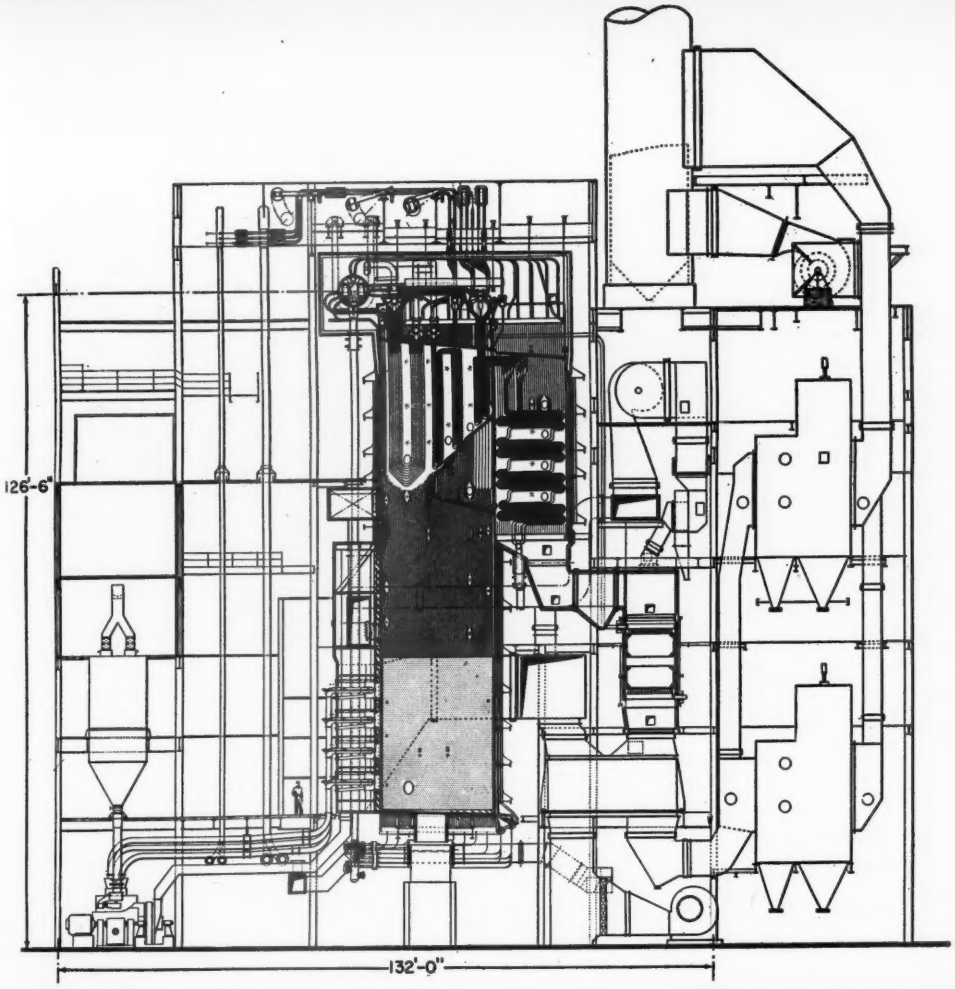
BURLINGTON GENERATING STATION

OF PUBLIC SERVICE ELECTRIC AND GAS COMPANY



BABCOCK & WILCOX

BOILER DIVISION



Supported by sound, practical engineering, Public Service Electric and Gas Company is engaged in a continuing, progressive policy of planning and over-all expansion to provide abundant, economical electricity to its large body of customers.

As part of this far-sighted program, Public Service Electric and Gas Company has installed a new, highly efficient 185,000 KW unit at its Burlington Generating Station. A B&W Radiant Boiler, generating over 1,225,000 pounds of steam per hour, contributes to the high level of performance of this new installation. The boiler is pulverized-coal-fired with provision for oil-firing, and is served by five B&W pulverizers. It is designed with divided furnace construction, gas recirculation, pressure firing and natural circulation. Unit design pressure is high—2700 psi, and the temperature is 1100 F at the superheater outlet with reheat to 1050 F.

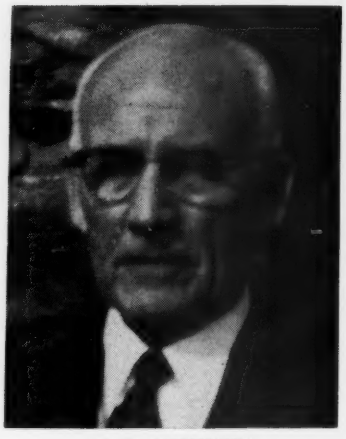
Modern, efficient B&W steam generators, such as the latest unit at Burlington, are the results of long experience in designing, fabricating, erecting and servicing central station boilers of all types. Reinforcing this experience is an unending program of B&W research and development aimed intensively toward achieving still higher efficiency levels in the future.

The Babcock & Wilcox Company, Boiler Division, 161 East 42nd Street, New York 17, N. Y.

G-753

Pages with the Editors

As this issue is being circulated, members of the National Association of Railroad and Utilities Commissioners are assembling for their annual national convention in San Francisco, California, July 24th to 27th. In keeping with the spirit of this event, the leading article in this issue, written by a veteran and active former state commissioner who only last year was the retiring president of the NARUC, stresses the increasing responsibilities which public service commissions have.



W. F. WHITNEY

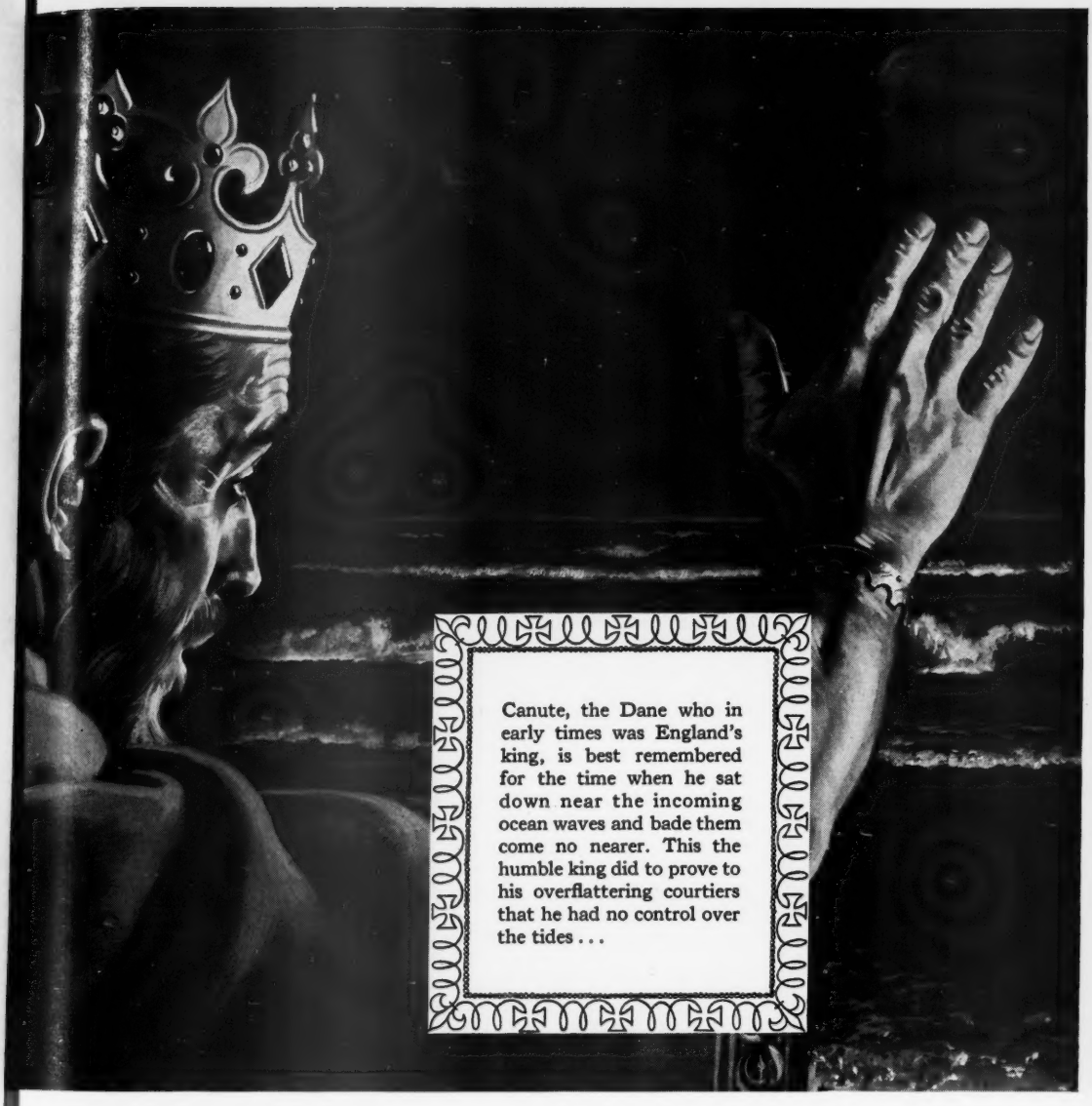
It is a tendency which has been growing year by year for several decades. In the very beginning—before there were state commissions—the state legislatures tried to fix rates by statutes. Regulation then did not seem too important. Then in Smyth *v.* Ames (1898), the U. S. Supreme Court's ruling virtually required that regulation would have to be a full-time job. The state commissions started coming into existence, beginning in the state of Wisconsin and New York state in 1907.

Then there followed a period of judicial supremacy in which the federal courts carefully supervised the work of the state commissions and imposed all sorts of court-made tests and standards of confiscation, due process, and so forth. The third period of commission independence came with the recognition of "expertise" in the series of decisions culminating in the Hope Case. In other words, the commissions were supposed to be their own bosses. Their findings and opinions were entitled to strong presumptions, especially as to facts.

W. D. WORKMAN, JR.

With each passing year public utility operations continue to become more vast in scope, more important, and more complex. Dollarwise, or by any other standard, the job of regulating utility service is a much more difficult and delicate operation than it was five, ten, or twenty years ago. There is the responsibility of balancing the interests not only of investors and consumers but also of different classes of investors and consumers within the framework of the over-all public interest. In addition, the modern public service commissioner is supposed to weigh such matters as conservation, economic and social implications.

In short, the modern commissioner's job is becoming that of a real trustee of the public interest. W. F. Whitney, now consultant and former member of the public service commission of Wisconsin,



STEMMING THE OCEAN TIDE

As King Canute nobly showed, no man, even in exalted position, can govern the elements . . . our efforts only can be toward resisting them. Kerite Cable, in submarine, underground and above-ground applications, has proved, over the years, singularly successful in resisting the destructive action of the elements —even of time itself. Small wonder the dependability, durability and unique superiority of Kerite Cable insulation have been relied on for years, the world over, wherever formidable cable problems present themselves.

The value and service life of a product can be no greater than the integrity and craftsmanship of its maker.

Founded 1854

KERITE CABLE

THE KERITE COMPANY—30 Church St., New York 7, N. Y.
Offices also at 122 S. Michigan Ave., Chicago; 582 Market St., San Francisco;
3901 San Fernando Rd., Glendale 4, Calif.; 31 St. James Ave., Boston

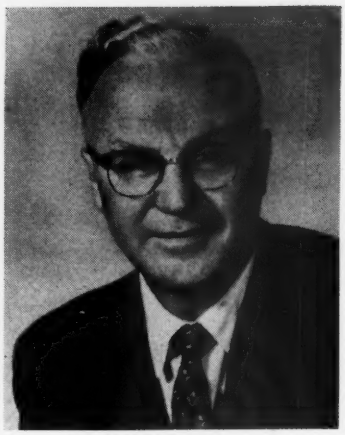
has written a thoughtful and penetrating article about this tremendous increase in the responsibilities of a regulatory commissioner's job. During his fifteen years' service as a member of one of the foremost active and pioneer state commissions, MR. WHITNEY served the longest tenure of any Wisconsin commissioner since the creation of the old railroad commission in that state back in 1874. He was also a member of the executive committee of the NARUC for thirteen years.

* * * *

EARLY last year as Governor James F. Byrnes was leaving his office as the head of the state of South Carolina, a legislative investigation was launched into the operations of the South Carolina Public Service Authority, better known as the Santee-Cooper project. It was not the first time, and may not be the last time, that the controversial experiment of the state in the electric power business attracted legislative scrutiny. Charges of inefficiency, mismanagement, and unprofitable operations were among the items investigated.

THE result has been an inconclusive report by a split decision. It is agreed that Santee-Cooper has improved its position but that it has suffered from financial deficiencies and managerial mistakes made in good faith. But while a majority of five cleared the management of charges of incompetence, a minority of four failed to do so. W. D. WORKMAN, JR., well-known journalist and now free-lance writer resident in Columbia, South Carolina, has analyzed the majority and minority reports and has written an objective account of both points of view (beginning on page 83).

MR. WORKMAN has for some years been a reporter and commentator on South Carolina and southern developments. He serves as special correspondent for *The News and Courier* (Charleston), *The Charlotte Observer*, *The Greenville Piedmont*, and the *Evening Herald* (Rock Hill). His work as a journalist began in 1936 and has continued with the exception of five years' military duty during



O. K. BUCK

World War II as an antiaircraft Artillery officer.

* * * *

IT is one of the anomalies of present-day business promotion in many lines that good salesmanship and engineering know-how must go hand in hand. This is especially true in promoting ready home and business uses of electricity. The engineer's know-how must be enlisted, not only to take care of such technical factors as load building and load balancing, but also for such commercial aspects as discovery and establishment of new sales opportunities in places where they did not exist before.

MANY engineers who might have been tempted to adopt a cavalier attitude towards pure salesmanship, as such, in years gone by, are finding the new business challenge both intriguing and stimulating. O. K. BUCK, manager of commercial and industrial business for the Los Angeles Department of Water and Power, has explained the importance of this new rôle of the engineer-salesman in an article for the FORTNIGHTLY, of which he is a coauthor with JAMES H. COLLINS, professional author of business articles, resident in Hollywood, California.

THE next number of this magazine will be out August 2nd.

The Editors

what's the "99" doing here?

Brokerage offices use the 99 Calculator to tote up the day's trading and figure their commissions. Its great speed and never failing accuracy make it a "natural" to back up stock market transactions.

Customers as well as brokers rely on the Remington Calculator. It's fully automatic, has touch method operation and it prints too! That's why so many "blue chips" use the 99 Calculator for cost accounting...inventories... payrolls and all business mathematics.

Remington Rand

DIVISION OF SPERRY RAND CORPORATION

Coming IN THE NEXT ISSUE

(August 2, 1956, issue)

★

ECONOMIC AND REGULATORY ASPECTS OF ACCELERATED DEPRECIATION

What was the intent of Congress in liberalizing tax depreciation practices for all type of business through the establishment of alternative methods of deduction—the so called "accelerated depreciation"? If it was the purpose of Congress to encourage the building of industrial plant by deferral of heavy corporate income tax liability during the earlier years of such plant construction, were such benefits intended for all kinds of business? Or, was it the purpose of Congress to deny such benefits, in whole or in part, to public utilities as a group while leaving them available to other forms of business? These and other basic questions are examined in a very comprehensive article by C. P. Guercken, assistant to the vice president of Ebasco Services Incorporated, who has made an exhaustive study of all of the known or reported regulatory and accounting orders so far issued by the federal and state commissions regarding the treatment of accelerated depreciation. It will be found an excellent and informative roundup of multiplicity of developments in a quickly changing and very important picture. In addition to marshaling the facts, the author has added his own thoughtful and persuasive interpretation.

HOW MUCH RECLAMATION DO WE NEED?

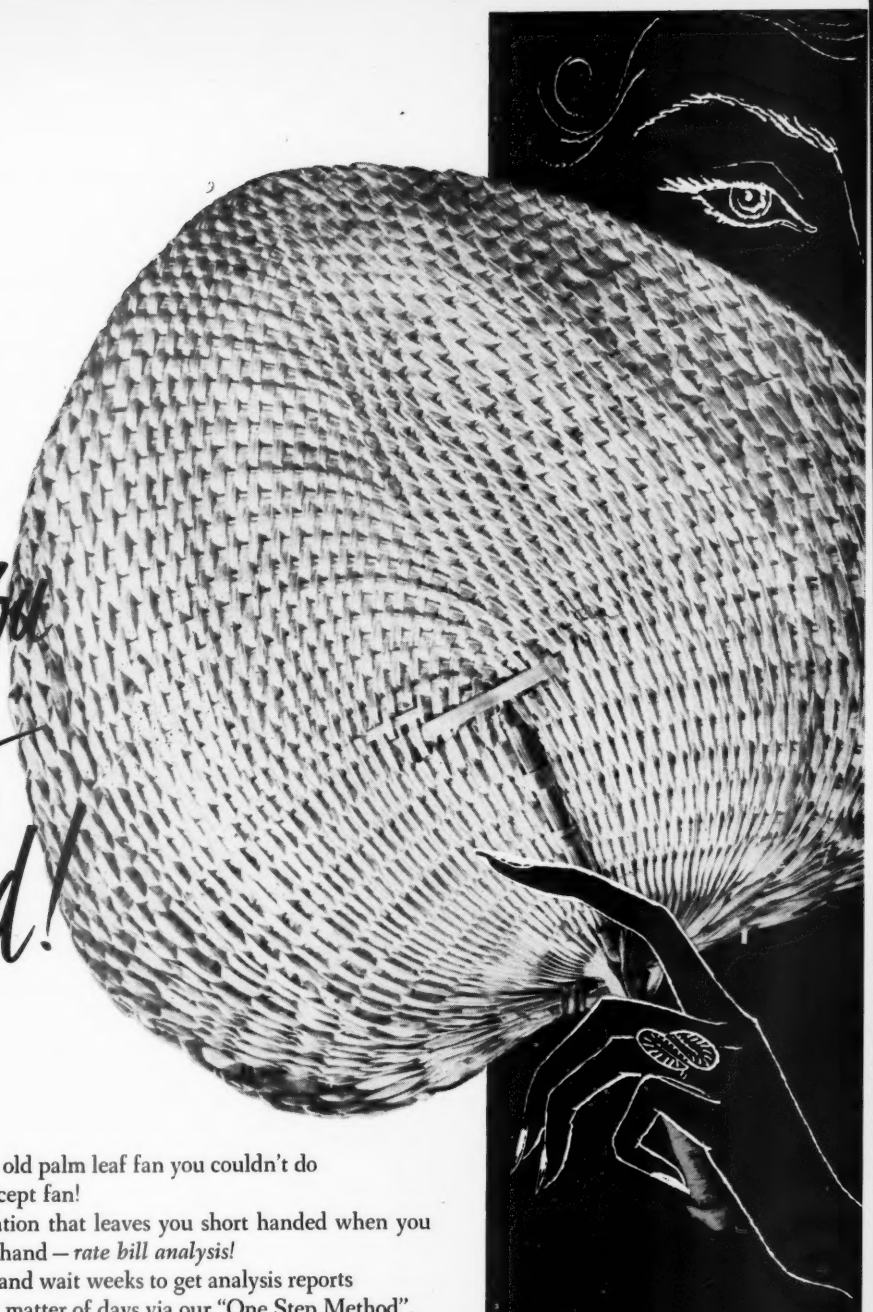
Surplus agricultural production activity—that paradoxical superabundance which has plagued our national economy for nearly a decade—is the subject of an enlightened and somewhat satirical article about reclamation. Written by a veteran Washington newspaper correspondent, T. N. Sandifer, this article questions the common sense of bringing more highly expensive acres of arid land into production by reclamation, at the same time the soil bank program plans to pay farmers for taking established acres out of production. On the one hand, Uncle Sam is paying the farmer to "mothball" part of his land. On the other hand, the taxpayers are getting bigger and bigger bills for projects which will bring new lands into production and inevitably contribute to more agricultural surplus. With the forthcoming political campaign joining issue on the subject of the administration's "partnership" policies and the charge of the political opposition about "give-away" practices in dealing with our natural resources, Mr. Sandifer has made a timely contribution.

THE CASE FOR COMPANY PUBLICITY

How often does a utility company operation make news? How often should it make news? Should publicity on the whole be encouraged or discouraged, or should the utility management simply take care of itself? Raymond E. Donovan, copy supervisor for The Connecticut Light & Power Co., has written a practical account of what utility companies can do themselves in bringing about more satisfactory publicity. Here are some hints and suggestions about simple little things which can add up on the whole to a good, bad, or indifferent press for any utility company operations.

★

Also . . . *Special financial news, digests, and interpretations of court and commission decisions, general news happenings, reviews, Washington gossip, and other features of interest to public utility regulators, companies, executives, financial experts, employees, investors, and others.*



left You Short handed!

When you used the old palm leaf fan you couldn't do any work except fan!

There's another operation that leaves you short handed when you turn out the work by hand—*rate bill analysis!*

Why tie up your staff and wait weeks to get analysis reports when you can get them in a matter of days via our "One Step Method".

We can run 200,000 to 300,000 bills a day through our Bill Frequency Analyzer Machine (exclusive with R & S), accuracy and speed are assured, cost is at least 50% lower and all the work is done in our office!

Send us a sample of your sales listing sheet, a copy of rate schedules and an estimate of number of customers billed on each rate, and your frequency table requirements. We'll give you an estimate of costs *without charge.* Compare these with your own, you'll find hand work just doesn't pay!

R&S YOUR KEY TO BETTER FIGURES

Recording & Statistical Corporation

100 Sixth Avenue • New York 13, N.Y.

Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

EDITORIAL STATEMENT
San Francisco News.

"The biggest and most legitimate congressional lobby in the country is the public. But it seldom gets going."

T. COLEMAN ANDREWS
Former U. S. Commissioner of Internal Revenue.

"America today is in the death grip of taxation. Taxes are too high from top to bottom. Much too high."

EARL A. LAMB
President, National Association of Mutual Insurance Agents.

"Trade associations are a mighty bulwark against government regulation and, yes, even dictatorship. Trade associations serve as valuable protectors of our free enterprise system."

WALLACE STERLING
President, Stanford University.

". . . to insure that constructive competition (between universities) shall remain vigorous and productive, it is essential that those institutions which do not enjoy tax support should receive from private sources the means of remaining strong."

G. EDWARD PENDRAY
Pendray, Cook & Hoving.

". . . the realm of company policy [is the] area where public relations thinking plays what is perhaps its most important rôle. For in the long run the public cannot be fooled. Good public relations does not begin with mere *representations* of corporate virtues—it begins with the *truth.*"

EDITORIAL STATEMENT
The Wall Street Journal.

"Every one of the agencies or departments or bureaus owes responsibility to the Congress, for the Congress taxes the public and appropriates the sums of money the agencies must have to keep going. If Congress is denied information it seeks, how can Congress properly legislate in areas which concern the agencies?"

WILLIAM T. FARICY
President, Association of American Railroads.

"It is . . . important to commerce and to defense that the other forms of transportation [as well as railroads] be enabled to keep pace with the technological progress which is part of the American way of production and distribution—and that this progress should be accomplished through investment, within the American private enterprise framework."

JOHN W. MCCORMACK
U. S. Representative from Massachusetts.

"A true representative of the people tries to follow the people's desires and, at the same time, he tries to lead in formulating ways of accomplishing those desires. He leads the people in the sense of calling to their attention the difficulties of achieving those aims and the ways to overcome the difficulties. This means that, where necessary, he shows special interest groups how, according to his own interpretation and his judgment and his conscience, their desires need to be tempered in the common interest or for the future good of the nation."

This new Systems Operations Center of the Jersey Central Power & Light Company keeps in touch with remote stations through Bell System channels for telemetering and remote control.

ell System communications help
rsey Central regulate power transmission

ed pegs in wall diagram indicate
nts of line to be isolated for main-

Channels for telemetering and remote control enable the Jersey Central Power & Light Company to regulate power transmission every step of the way from generator to home, store and factory.

An engineer glances at the dials, which give him a running picture of the system and the changing demands he has to meet—information which has been brought to him by Bell System telemetering channels.

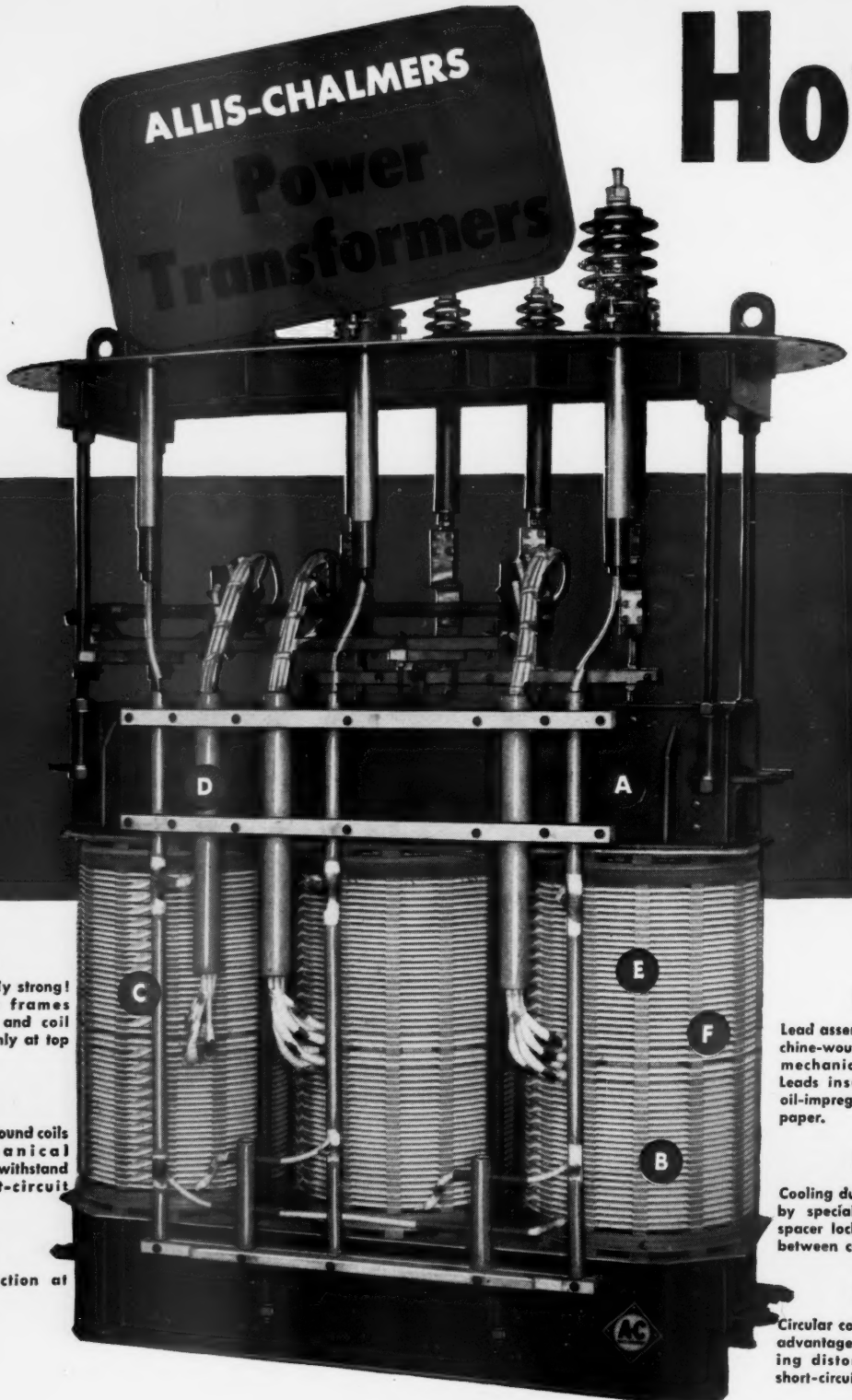
From his position, he switches loads, starts and stops generators and localizes failures—even at distant points—over a network of remote control channels provided and maintained by the Bell System.

If you would like to know more about how Bell System communications can help you, an engineer will be glad to survey your company's needs. There's no obligation. Why not call your Bell Telephone representative today?

BELL TELEPHONE SYSTEM

Private Line Telephone, Private Line Teletypewriter
Channels for Data Transmission, Telemetering, Remote Control, Telephotograph, Closed Circuit TV

How



A

echanically strong! urdy side frames amp core and coil sembly firmly at top d bottom.

B

ntinuous wound coils dd mechanical rength — withstand igh short-circuit resses.

C

xtra protection at ossovers.

D

Lead assembly has ma chine-wound tubes fo mechanical support Leads insulated wit oil-impregnated cabl paper.

E

Cooling ducts—forme by special snap-loc spacer locked in plac between coils.

F

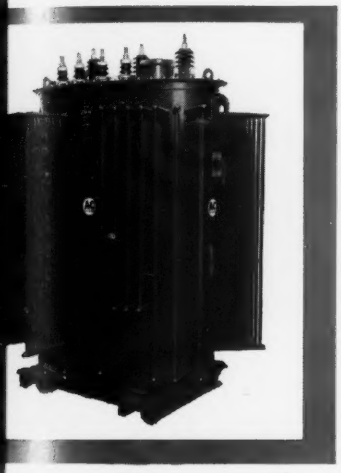
Circular coil shape ha advantage of prevent ing distortion unde short-circuit conditions

1. Co and s to the valve

ALLIS

Balanced Design Works for You

Here's a combination of design features that adds u to *balanced design*... long transformer life



No single feature is all-important in transformers! But together they mean *balanced design* — all the things you want and need in a transformer.

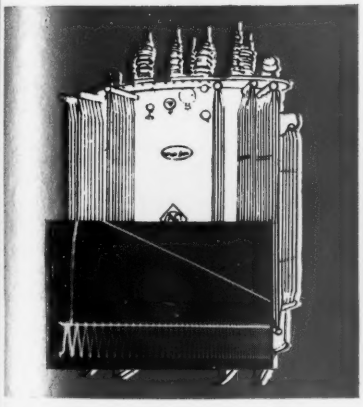
- **High impulse strength**
- **Corona-free construction**
- **Quiet operation**
- **Reduced size and weight**
- **Dependable performance**
- **High short-circuit strength**
- **Rugged mechanical construction**

In balanced design, every feature must contribute its full share to the operation. No feature can outweigh another — each must complement the other.

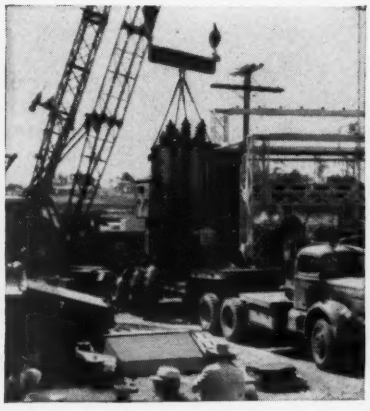
For example — of what value is "light weight" if it cuts performance? With balanced design you get both light weight *and* efficient performance.

Get complete information. Call your nearby Allis-Chalmers office or write Allis-Chalmers, Power Equipment Division, Milwaukee 1, Wisconsin.

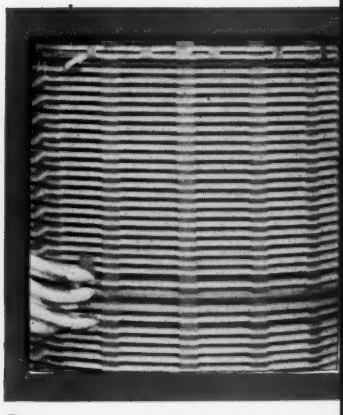
Three features of balanced design



1. Corona-free design. Repeated lightning and switching voltage surges may be applied to the transformer without damage, up to full values as defined by standards.



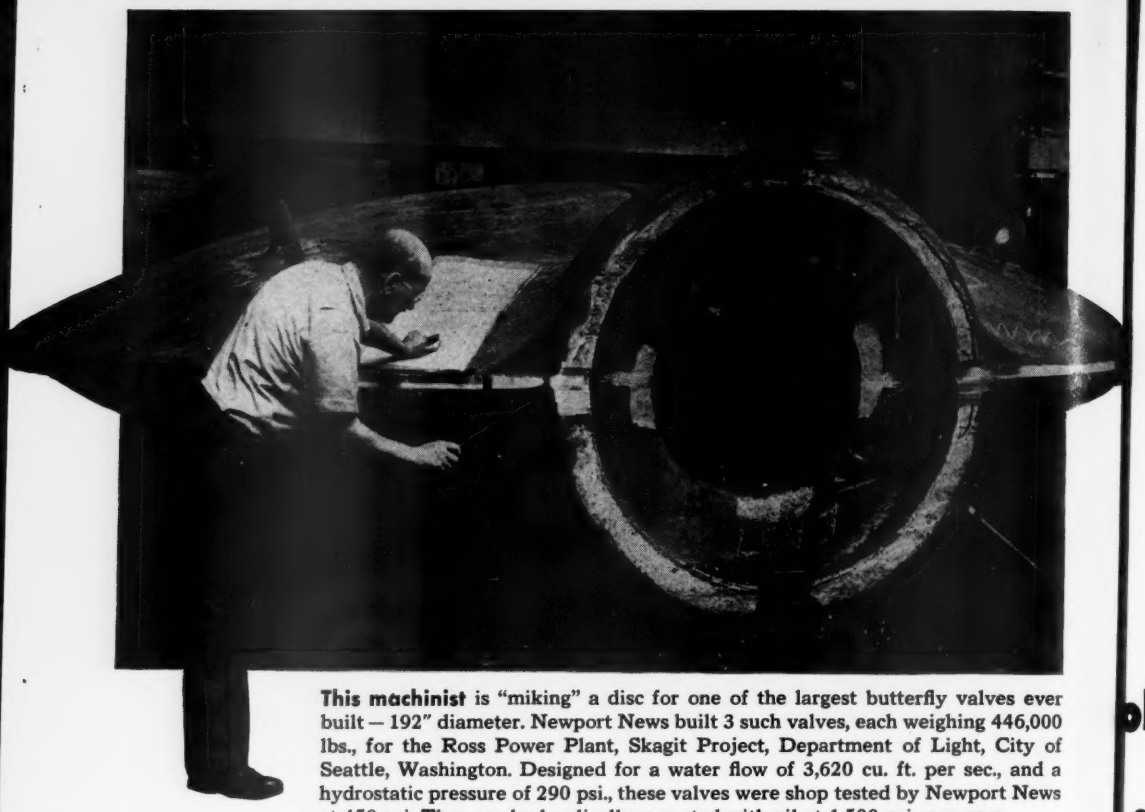
2. Reduced size and weight. This means higher rated transformers are easier to handle — can be moved without removing radiators and bushings.



3. Proper coil design plus static shields o interleaved coils where needed provides h series capacitance, as well as more unifo voltage distribution.

CHALMERS

A-4955



This machinist is "miking" a disc for one of the largest butterfly valves ever built — 192" diameter. Newport News built 3 such valves, each weighing 446,000 lbs., for the Ross Power Plant, Skagit Project, Department of Light, City of Seattle, Washington. Designed for a water flow of 3,620 cu. ft. per sec., and a hydrostatic pressure of 290 psi., these valves were shop tested by Newport News at 450 psi. They are hydraulically operated with oil at 1,500 psi. pressure.

Birth of a **200-ton** Butterfl

This disc for a 16-foot butterfly valve reflects two basic advantages of Newport News fabrication...

First, it exemplifies the *careful attention* Newport News craftsmen give to every detail. And secondly, it attests to the *quality* with which Newport News produces in massive equipment for public utilities and allied industries... due to Newport News' high integration of skill and production facilities.

Additional advantages accrue to customers from extensive work conducted in Newport News' testing laboratories on problems related to water power equipment.

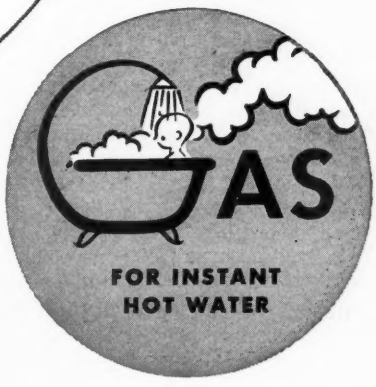
Avail yourself of the engineering talent, along with the specialized production techniques and the skill of Newport News craftsmen operating vast steel fabricating shops, five huge machine shops, drop forging and die facilities along with acres of brass, iron and steel foundries.

Let us bid on equipment for your present or future projects. If you are not familiar with the way Newport News can help you, write for our illustrated booklet entitled "Water Power Equipment" ...it's yours for the asking.

NEWPOR
NEWS

Shipbuilding and
Dry Dock Compan
Newport News, Virgi

olumbia Gas System
delivers a modern miracle
24 Hours-A-Day!



CHARLESTON GROUP: United Fuel Gas Company, Atlantic Seaboard Corporation, Amere Gas Utilities Company, Virginia Gas Distribution Corporation, Big Marsh Oil Company, Central Kentucky Natural Gas Company; **COLUMBUS GROUP:** The Ohio Fuel Gas Company; **PITTSBURGH GROUP:** The Manufacturers Light and Heat Company, Binghamton Gas Works, Cumberland and Allegheny Gas Company, Home Gas Company, The Keystone Gas Company, Inc., Natural Gas Company of West Virginia; **OIL GROUP:** The Preston Oil Company.

Only DODGE trucks are Chrysler-engineered

to save *your* business real money!

Dodge gives you top engine economy with exclusive Power-Dome V-8's!

Out on the job is where a truck earns its keep—and that's where famous Chrysler engineering pays off for Dodge truck owners! Here's how Dodge can help *you* save . . .

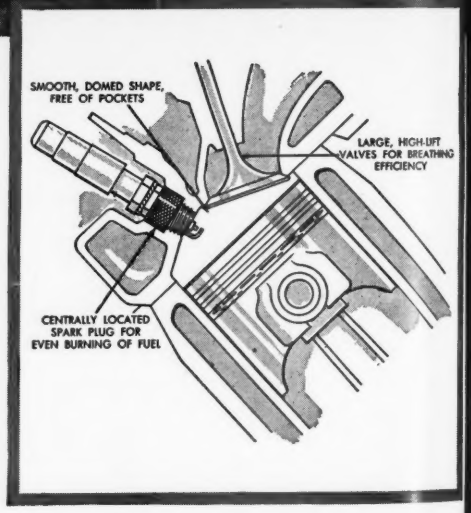
Low maintenance. You get thousands of added miles of like-new engine performance because combustion chambers have no "pockets" to accumulate carbon.

Greater gas economy. Short-stroke Power-Dome V-8 engines deliver full power on *regular* gas, give you more miles per gallon.

Shortest turning radius. Gear-before-axle steering makes turning easier, saves time.

Biggest, most comfortable cabs. Driving is safer, less tiring.

Add it all up, and add in the fact that Dodge trucks are priced right down with the lowest. You get more truck for your money—and any Dodge dealer can prove it to you!



Only Dodge offers Power-Dome V-8 design. This dome-shaped combustion chamber burns fuel more efficiently; saves gas, maintenance.

GET YOUR DODGE DEALER'S DEAL BEFORE YOU DECIDE

DODGE TRUCKS WITH THE *FORWARD* LOOK

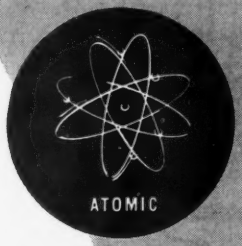
CONSIDER

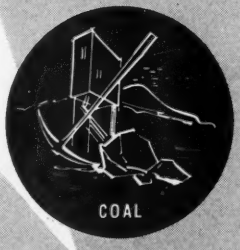
Pioneer services

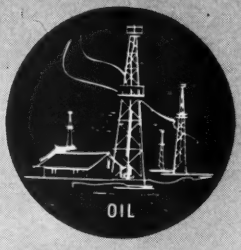
TO HELP YOU PLAN

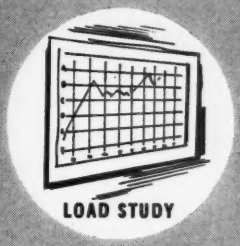
electric power

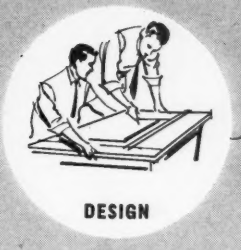
WHATEVER THE SOURCE

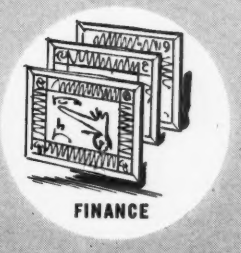












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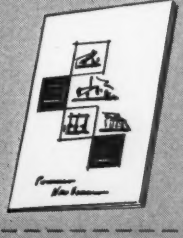

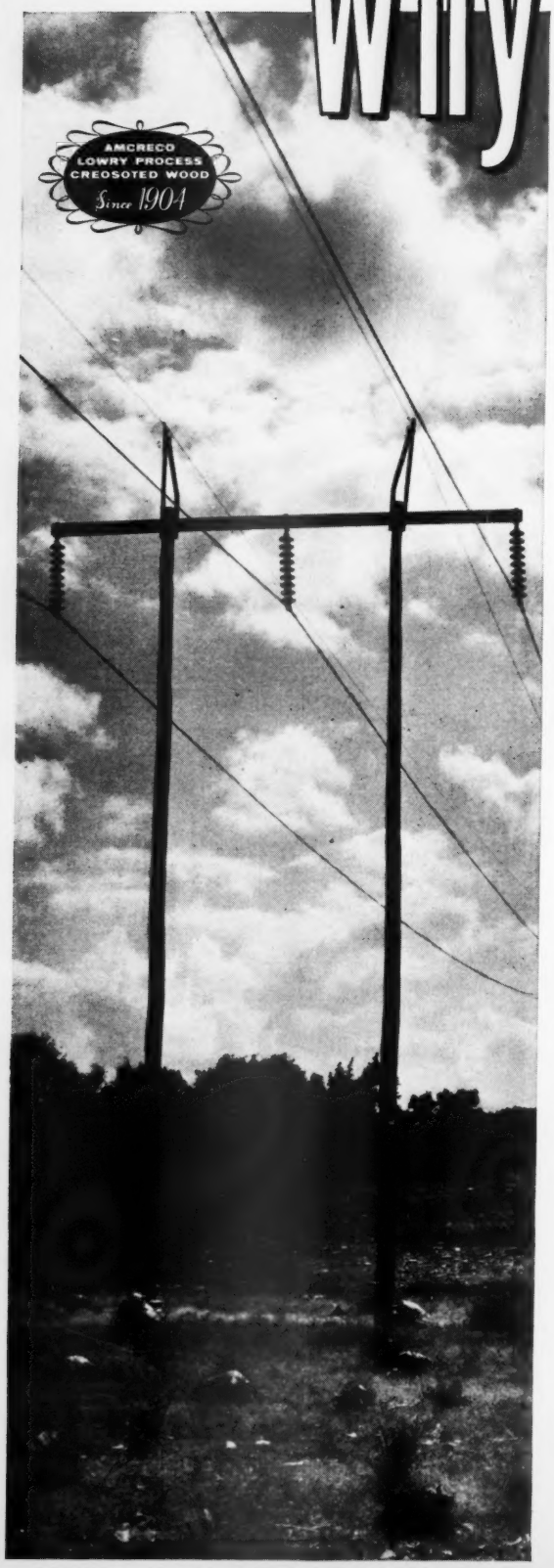

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JULY-AUGUST

Thursday—19 *Western Electronic Show and Convention will be held, Los Angeles, Cal. Aug. 21-24.* ***Advance notice.***	**Friday—20** *Western Summer Radio-Television and Appliance Market ends 5-day western merchandise mart, San Francisco, Cal.*	**Saturday—21** *International Organization for Standardization ends 6-day council meeting, Geneva, Switzerland.*	**Sunday—22** *American Bar Association will hold annual meeting, Dallas, Tex. Aug 27-31.* ***Advance notice.***
Monday—23 *Michigan Independent Telephone Association will hold annual convention, Grand Rapids, Mich. Sept. 6, 7.* ***Advance notice.***	**Tuesday—24** *National Association of Railroad and Utilities Commissioners begins annual convention, San Francisco, Cal.*	**Wednesday—25** *New Jersey Gas Association will hold annual meeting, Spring Lake, N. J. Sept. 7.* ***Advance notice.***	**Thursday—26** *Independent Natural Gas Association will hold annual membership meeting, San Antonio, Tex. Sept 9-11.* ***Advance notice.***
Friday—27 *Southern Gas Association begins pipeline engineers' round-table conference, Shreveport, La.*	**Saturday—28** *Pacific Coast Gas Association will hold annual meeting, Coronado, Cal. Sept. 11-13.* ***Advance notice.***	**Sunday—29** *Columbia University, Industrial and Management Engineering Department, begins annual utility management workshop, Harriman, N. Y.*	**Monday—30** *American Institute of Electrical Engineers will hold annual electrical conference of the petroleum industry, Kansas City, Mo. Sept. 12-14.* ***Advance notice.***
Tuesday—31 *American Water Works Association, New York Section, will hold annual meeting, Lake George, N. Y. Sept. 12-14.* ***Advance notice.***	**AUGUST** **Wednesday—1** *Public Utilities Association of the Virginias will hold annual meeting, White Sulphur Springs, W. Va. Sept. 14, 15.* ***Advance notice.***	**Thursday—2** *American Transit Association will hold annual meeting, St. Louis, Mo. Sept. 17-19.* ***Advance notice.***	**Friday—3** *Southern Gas Association begins commercial sales round-table conference, Dallas, Tex.*

Courtesy, W. D. Workman, Jr.

Santee-Cooper Navigation Lock

Public Utilities
FORTNIGHTLY

VOL. 58, NO. 2 JULY 19, 1956

The Trustee Responsibility of A State Commissioner

With each passing year public utility operations continue to become more vast in scope, more important, and more complex. Dollarwise, or by any other standard, the job of regulating utility service is a much more difficult and delicate operation than it was five, ten, or twenty years ago.

BY W. F. WHITNEY*

"WHO would do it—if *you* didn't?" That query was put to me by a very learned gentleman while discussing the work and laws affecting administrative agencies in general, and public service commissions in particular.

Well, who would undertake the stupendous task of administering the laws which require the establishment of rules, the application of such rules to a given set of facts, and the issuance of orders calculated to provide the proper balance among the various elements of our society—if regulatory commissions did not?

I do not know the answer!

The gentleman's query did bring sharply into relief the strategic and valuable status of administrative agencies in government.

*Former member and now consultant, Wisconsin Public Service Commission; also, former president, National Association of Railroad and Utilities Commissioners. For additional personal note, see "Pages with the Editors."

It did more. It re-emphasized the thought that a commission, and each commission*er*, functions not only as a servant of the legislature or Congress that creates them, but also as a *trustee* for the sovereign people—truly the keystone in the arch of the administrative process in governmental regulation.

My comments will attempt to portray a few of the many scientific and technical changes and advances prior to and during this fast-moving atomic age; to provide a résumé of the growth in power and duties of government which finally compelled delegation of some of those powers to administrative agencies; to glance at the tremendous responsibility thereby vested in commissions; and finally to conclude by emphasizing the attributes and importance of the *trusteeship* concept of a regulatory commission's duties.

This is a concept that goes *much deeper* than is indicated in the familiar phrase "a public office is a public trust." We must be constantly conscious that we are thinking and acting for another, making decisions for another. We have taken an oath to obey the law. A proper standard of conduct is obligatory as a matter of moral principle.

Failure on our part would not only undermine public respect for the law itself, but would negate a trustee concept that stands to become an accepted part of our American way of life.

Of the many hundreds of federal and state administrative agencies, boards, bureaus, departments, commissions, et cetera, now in operation, I have particularly in mind state public service commissions, although the trusteeship idea is applicable to all administrative agencies.

Our Phenomenal Technical Changes and Advances

In a recent issue of *This Week* magazine, an article told the story of Datatron—an electric computer which, weeks in advance of the actual events, predicted accurately the outcome of the football games played January second of this year in the Orange, Sugar, Cotton, and Rose bowls. This device and what is called its politically minded uncle, Univac, utilize masses of data fed into them to arrive correctively at objective answers which an individual could not possibly attempt because of the sheer volume of the computations.

The spectacular accounts of life at some future time, by Jules Verne and others, failed to foresee much that has already come to pass. New and startling industrial and scientific changes have occurred and are occurring in such rapid-fire order that we have little opportunity to assimilate one, before another is upon us.

Let's take a quick inventory. A generation or two ago:

> No automobiles — today, vehicles of 300 horsepower that start with the turn of a key, move forward or backward by pressing a button, turn with one finger pressure, travel on self-sealing tires, and are propelled by a liquid extracted from the bowels of the earth.
>
> No telephones — today, dial talking between continents over wires and through the air, with a near possibility of the converser visible at each end; no radios or television — today, millions of radio and television towers stretching their fingers into the air from roofs of the palatial mansion and the smallest shanty.
>
> The basement and woodshed labora-

tories like Henry Ford's and Thomas Edison's — today, acres of testing grounds, superbly equipped buildings, and large corps of highly trained technicians.

No pipelines — today, 36-inch buried pipelines that cross the country from boundary to boundary conveying billions of cubic feet of water, oil, and gas.

No airplanes — today, jet-propelled giants traversing space at multiple times the speed of sound.

No atomic energy—today, its nth degree fantastic power is being harnessed as a peacetime force of such magnitude as to defy human conception, and it promises to revolutionize the whole power industry.

How can we assimilate these advances, this march of progress that has engulfed us? How can we find the true perspective and bring into line our industrial progress and our political progress with our social progress?

How often have you and I sat in groups discussing the broad implications of these changes only to come up with the sage conclusion that something must be done? And how often have you heard the common assertion that "there ought to be a law"? Not all agree in what the law ought to do, but the chances are good that in the minds of many people the solution lies in *a* law —in the application of the principles of democratic government to a situation into which the very people who constitute that government have allowed themselves to be precipitated. Frustrated by all the conflicting interests having a legitimate claim upon the resources and opportunities which nature and man's ingenuity have made available, we turn to an omniscient government for the solution. And yet that government is only we, the people!

The Rise of the Administrative Process

How did this government which restrains those who need restraining and helps those who need help, become such a potent and practical force? To a considerable degree it lies in the evolution of the administrative process. Though Congress or state legislatures enact the laws and the courts interpret them, it remains for the administrative agencies charged with their application to give true life and substance to the law which they administer.

With us, it is fundamental that the au-

¶ "PROBABLY *few agencies exercise a trusteeship of such far-reaching influence as the full-time public service commission because—more than most and as much as any—it has the factual and judgment assignment of weighing the factors of industrial development and financial solvency, of determining public need and full use of resources, of finding a solution which will use our technological 'know-how' to the fullest, of allowing reasonable and just return to the entrepreneur, of assuring adequate service to the public, and in utilizing our natural resources in a manner most likely to conserve them for the fullest possible value in the public interest.*"

thority of law generates from "We, the people . . ." via a Constitution. Constitutions provide for three distinct branches of government: legislative, executive, and judicial. State constitutions provide that the power to make the laws shall be vested in a legislature. When a legislature creates an administrative agency, it states the policies, procedures, standards, and enumerates powers and duties of such agency. This particular function referred to as a "delegation of power" from the legislature to an agency or commission, constitutes a very important chapter and change in human affairs.

It is the beginning of a force that has become powerful in aiding government to develop the technique of enforcement through the processes of (1) delegation of power, (2) practice and procedure, and (3) judicial review. Administrative agencies have at last "come of age"; have definitely given efficiency and vigor to the whole governmental process; have evolved a fixed legal status as a fourth branch of government; are a strong spoke in the wheel of a current "age of change."

WHY, *how,* and *where* do these agencies fit so snugly and indispensably in the scheme of things?

The "why"? Numerous reasons. In the short life of our nation we have grown from 3,500,000 to 165,000,000 and we are growing at an unprecedented rate today. In entering and being absorbed in the present "age of change" we have developed from an agricultural economy to an industrial life with its huge accompanying problems of interdependence, congestion, and mechanization—from the hand, to the machine, to the atomic era. Modern life imposes cumulative problems on government at all levels to an extent that governmental operations have become colossal, technical, and complex. State legislatures in personnel, timing, details, and methods of functioning simply could not handle the load; convening for only part of each or every other year they are not adapted to solve immediate or pressing problems; they lack the expertness, flexibility, and special knowledge required to effectively cope with the intricate and voluminous demands on state governments.

THE "how"? By delegation of power and judicial review. Apparently the only "out" was by way of legislative process, a process delegating the authority to carry out the will of the state from its legislative source to the point of its application. In doing this, commission duties are subject to a double safeguard in protection of the public interest—they may be abolished at will by a legislature; their procedures and orders are always subject to judicial review. Yet, on appeal, court reversals are few, strong evidence of the court's confidence in commissions' integrity, judgment, and thoroughness. Experience and necessity have proved that commissions in large measure satisfy the demand for a more adaptable and detailed method of governmental regulation than could be afforded by legislatures alone, or by the courts.

The "where"? nation-wide. Through the avenues of Congress and the legislative bodies of the District of Columbia and of every state and territory in the United States, administrative law has given rise to hundreds and hundreds of federal and state agencies and commissions.

Over the years the whole field of ad-

The Trusteeship of the Utility Commission

"I LIKE to think of a public service commission not only as just one of the many arms of a state government with powers and duties defined by statute, but as a group of one to six men or women with powers and duties created by that broader concept of the word 'law' which from pagan days to now, in a sense, denotes a broad ethical connotation. Under that concept each commissioner and each public service commission holds a 'trusteeship' with the American people—a concept deeper and more penetrating than any statutory obligation."

ministrative law has been studied, criticized, nurtured, and commended by scholars, committees, and research and professional associations. The resulting laws enacted by Congress and many of the states are now generally and appreciatively recognized by the courts.

IT was said by the late Justice Jackson in his dissenting opinion in a 1952 United States Supreme Court case (Federal Trade Commission *v.* Ruberoid Co. 343 US 470, 487, 96 L ed 1081, 1094):

> The rise of administrative bodies probably has been the most significant legal trend of the last century and perhaps more values today are affected by their decisions than by those of all the courts, review of administrative decisions apart.

In coping with this administrative scheme of things, a solution has apparently been found in the medium of administrative agencies and commissions, although their functioning is as yet far from perfect. But of one thing I am sure —the combination of duty and influence of these agencies and their rise to power seem to focus over and over again the finality that administrative law is fully recognitive of the *trustworthiness* vested in commissions. The ebb and flow of their work involve millions of people, and billions of dollars.

A Commission: Its Trusteeship Concept

THE bare fact that commission powers have developed into such a potent force of law, of necessity imposes a corollary commission duty that with this force of law comes an obligation not only legal, but ethical and moral in substance and execution—an obligation to use this force in a proper manner and for the deserved benefits of all mankind.

Probably few agencies exercise a trusteeship of such far-reaching influence as the full-time public service commission because—more than most and as much as any—it has the factual and judgment assignment of weighing the factors of industrial development and financial solvency, of determining public need and full use of resources, of finding a solution which will use our technological "know-how" to the fullest, of allowing reasonable and just return to the entrepreneur, of assuring adequate service to the public, and in utilizing our natural resources in a manner most likely to conserve them for the fullest possible value in the public interest. With those potential effects on the life of man which the commission may exert, the agency has the burden of Atlas on its shoulders, a burden which in its execution impinges on the lives of practically every individual in our respective states.

MAY I illustrate a commission's varied duties by mentioning a few problems of the public service commission of Wisconsin (one of the state's 77 administrative agencies)? The commission:

Regulates 1,100 dams as to construction, operation, and maintenance.

Has jurisdiction over the level of 9,000 lakes, also over the level and flow of 11,000 miles of navigable streams.

Regulates the use of water of all streams for irrigation purposes.

Has passed on over 3,000 individual public utility issues of securities.

Determines the rates and adequacy of service of electric, gas, telephone, and water utilities that have a total property and plant investment of 1.5 billion dollars, affecting 99 per cent of the state's population.

Regulates the rates and service of 10,500 contract carriers and 340 common motor carriers.

Held, under the direction and approval of the commissioners, 2,180 public hearings during the last biennium, and issued 7,500 decisions and orders.

And regulates the service, safety, and rates of 21 railroads.

So much by way of hasty survey of the import and horizon of a commission's field of influence.

Across the board in the United States, similar responsibilities are assumed by public service commissions in proportion to their statutory authority, population, and geography.

But behind this staggering volume, expansion, specialization, and judgment factor, lie the real problems of a mature economy—to adjudicate the conflicts between various established services, or between an established and a new service, or to foresee public needs and desires of the immediate and distant future in order that the least possible maladjustment will occur. A commission must seek a plan which will stand the test of time; must

consider the producer, the consumer, the public at large, and especially that evasive and nebulous character, the child of the future.

I think of the "trusteeship concept" of a public service commission, and commissioner, as a responsibility above and beyond what the book says—it is a stake fundamentally affecting legal, ethical, and moral "rights of men" and the real destiny of our state and nation. Let's go back to our 1,100 dams to illustrate what I mean.

RECENTLY, a dam was proposed in one of the few almost lakeless counties of our state. Situated near good sources of power and flanked by low-rate electricity, there would be no question regarding level of rates, adequacy of service, or the opportunity for someone to establish a new business or expand an old one.

But here was a dam which could on one hand submerge good lands farmed since the very first settlers came to the state; while on the other hand its flowage could expand the opportunity for the public to fish, swim, and paddle in an area which was virtually devoid of such opportunities. The final decision of the commission would affect the lives of many people through not only their utility rates and service, but through their inherent recreational "right" to enjoy nature's many blessings.

A SIMILAR request for authority to establish a dam in another part of the state had been previously received. Here nature had already endowed the region with a natural beauty seldom seen in the country. A vital part of that beauty was a rushing river, abounding with fish which at least two Presidents of the United States have tried to lure onto a hook.

Here again, aside from the immediate issue of the need for more power and the effect of such additional power in the utility industry and the economic effect on the people, the commission was brought face to face with the recreational issue involving "rights of men" to enjoy nature as God's free gift.

Take the problem of determining discontinuance of partial railroad service *versus* abandonment of *all* service. Again, what to do? Commissions must decide whether the public interest will best be served by no discontinuance, partial discontinuance, or by complete abandonment. Children, grown to be grandparents, have daily heard the toot-toot of the whistle and

"YES, a commissioner's true status today is not that of just an appointee or electee—it is as a TRUSTEE *assuming duties imposed in faith, and in whom hope and confidence are reposed by legislatures, the public, and the courts. This then is the 'trusteeship' which a public service commission and each commissioner has been in reality forced to assume bit by bit. Out of each individual situation commissions are trying to evolve a philosophy which will permit their decisions to meet acceptance not only now, but in the indefinite future."*

watched the evening train roll into the little station for half a century; if service is abandoned, their whole lives are changed. Time marches on. Facts, study, discretion, judgment — the commission must make the final decision. Who would argue that the "trusteeship concept" could not well come into play here, as well as in the "water" determinations?

ANOTHER example is the competitive struggle as to who should prevail where the natural gas interests come to grips with the coal interests, each involving millions in dollars and users. Who would argue that the trusteeship concept would not again be invaluable?

One more example especially illustrates the all-important determinative and judgment factor to be exercised by commissions in attempting to establish rates that are just and reasonable.

When a group of persons first enter the utility field they knowingly sacrifice certain elective private business methods for a regulated utility status with the state, where the interest of the public transcends that of the individual, and where regulatory agencies prescribe the rates. And right there is where the integrity, competence, and judgment factors of the trusteeship concept should come into full relief. In this rate perspective, especially, commission responsibilities are tremendous in determining the amount of return on billions and billions in property and plant investments, and the rates that 99 per cent of all possibile utility users must pay. Once again the trusteeship concept, if applied, will put beyond doubt equal "rights of men" to producer, consumer, the public, and to the utility bona fide investors. Which would mean that in fixing the rate of return the commission would make cost the basic standard for determination of a "just and reasonable" rate, and which would also take into account any necessary incentive requirement, and any hazards inherent in the business which are not included in operating expenses or the rate base. (U.S.A. Federal Power Commission, Docket No. R-142, comments of public service commission of Wisconsin, page 6.)

Almost endless comparable situations could be cited.

YES, a commissioner's true status today is not that of just an appointee or electee—it is as a *trustee* assuming duties imposed in faith, and in whom hope and confidence are reposed by legislatures, the public, and the courts.

This then is the "trusteeship" which a public service commission and each commissioner has been in reality forced to assume bit by bit. Out of each individual situation commissions are trying to evolve a philosophy which will permit their decisions to meet acceptance not only now, but in the indefinite future.

Consequently, *what attributes should a commissioner possess,* in addition to statutory requirements, to live and reflect and practice the ethical standards of the trusteeship concept?

He must have foresight and to have foresight requires courage.

He must have unquestioned integrity, eager desire for study and research, balanced judgment, a judicious temperament, and a group of ideals consistent with application of the Golden Rule.

He must eventually be a living symbol of specialization and expertise.

It is also presumed that he has the in-

Past Is Prologue

"A NATION that is alive to its future has to be interested in its past. Perhaps one of the greatest mistakes made by any generation is that it has not read the minutes of the last meeting—it starts its course with the handicap of having to learn by experience what it should have learned from the records of its predecessors. Generations in our country, and in a way centuries before us, have blazed the trail of many phases of administrative law to be traveled by others. The present 'age of change,' characteristic of others gone before, is only a continuous moving on or passing by."

nate ability to do the job and that he will develop the areas of "know-how" which he may have lacked when first selected.

While it is true that such men are not easy to locate, an ultraeffort should be made to find persons with just such attributes, and to offer a stipend adequate to attract those who measure up to these standards and responsibilities.

WHOSE *is the first responsibility?* The answer goes far beyond the usual thinking that a commissioner is a political appointee or electee—it stems back to moral duties of state governors and state electorates to select men or women who, first of all, possess and exercise attributes consistent with the trusteeship concept; men and women who will turn to profitable use the immense impetus toward administrative agencies, and who will truly take upon themselves the regulatory responsibilities involved. *He who selects assumes this first responsibility.*

And one must never overlook the fact that the willingness, dependable performance, and general morale of the hundreds and thousands of loyal commission staff members, at all levels, will vary directly as commissioners measure up to the trust imposed in them.

Conclusion

IN my own span of experience I have seen the pattern of development of the mechanics of the commission's work; the problems of administration; the inability of a legislature to meet the problem involved; the search for a device to unburden legislatures; the rise of the concept "delegation of power" to administrative agencies; the creation of these agencies to interpret and enforce standards through set rules of procedure; the evolution of

the fact-finding function and the development and issuance of orders in accordance with established procedure; ultimate recognition of this process by the court; the strengthening of the checks on the administrator through review of orders, appeal, and if necessary the abolishment of the agency; and, finally, the court's and the public's acceptance and recognition of administrative law as an inherent part of the system of democratic government.

But I have seen more: the struggle to get adequate service for the consumer; a fair return for the producer; reasonable and just rates for the purchaser; the rise and decline of outmoded services; and a growing need for an over-all view of our resources. With the latter requirement, the function of the public service commissioner reaches to the broadest horizons and sets forth a challenge of limitless scope to calculate and set a pattern of future development. We can and must accept that challenge. There is no other way.

I like to think of a public service commission not only as just one of the many arms of a state government with powers and duties defined by statute, but as a group of one to six men or women with powers and duties created by that broader concept of the word "law" which from pagan days to now, in a sense, denotes a broad ethical connotation. Under that concept each commissio*ner* and each public service commission holds a "trusteeship" with the American people—a concept deeper and more penetrating than any statutory obligation.

A NATION that is alive to its future has to be interested in its past. Perhaps one of the greatest mistakes made by any generation is that it has not read the minutes of the last meeting—it starts its course with the handicap of having to learn by experience what it should have learned from the records of its predecessors.

Generations in our country, and in a way centuries before us, have blazed the trail of many phases of administrative law to be traveled by others. The present "age of chance," characteristic of others gone before, is only a continuous moving on or passing by. It is easy, in the push of everyday living, to forget time gone.

Administrative agencies, commissions, and generations must grow better and better by past experience. Habits, customs, ethical concepts, and "rights of men" will all fuse into some form of "systematized human conduct." In so doing, modern government is accepting and expanding the administrative process. Administrative agencies, the very fulcrum and hub of that process, should and must be the living personification of a dedicated trusteeship to guard and sustain the "rights of men."

REMEMBERING, always—*in the last analysis* it boils right down to (1) "he who selects" and (2) integrity, competence, balanced judgment, tolerance possessed by the persons selected.

If the trusteeship concept is *lived*, our nation and its peoples may be certain in mind that the rapidly mounting degree of regulatory responsibility is safely entrusted.

"Who would do it—if 'we' didn't?"

I still do not know the answer.

Split Decision on Santee-Cooper

Early last year, a legislative investigation was launched into the operations of the South Carolina Public Service Authority, better known as the Santee-Cooper project. It was not the first time, and may not be the last time, that the controversial experiment of the state in the electric power business attracted legislative scrutiny.

By W. D. WORKMAN, JR.*

The South Carolina Public Service Authority, better known as the "Santee-Cooper project," has weathered another investigation, but not without having its knuckles rapped in several particulars.

On the point of financial solvency—chief issue which prompted the legislatively authorized investigation—Santee-Cooper came clear, but the inquiry brought to light some serious questions affecting the authority's management. The investigation also disclosed that Santee-Cooper's present solvency resulted from drastic measures taken to preserve the authority's fiscal stability.

This latest inquiry was triggered by a 1955 recommendation of Governor James F. Byrnes as he was leaving office in January of last year. In a direct proposal that an investigation be initiated by the state legislature, Byrnes expressed serious concern over Santee-Cooper's fiscal affairs and its ability to meet increasingly heavy financial obligations.

This year, the nine-man committee (six legislators and three laymen) gave the 1956 general assembly a somewhat heartening report on Santee-Cooper's current financial health. But, in doing so, the committee disclosed wide differences of opinion within its own ranks as to the underlying factors affecting both the financial crisis and its solution.

They agreed that Santee-Cooper has improved its position, and that it cannot further improve its state of health in the future. They did *not* agree upon the causes of the poor financial health of recent years, nor upon the rôle played by management

*Free-lance writer resident in Columbia, South Carolina. For additional personal note, see "Pages with the Editors."

with respect to correcting the difficulty. Indeed, there was strong sentiment which held that management was in effect responsible for the difficulty, although that view did not reflect the majority view of the committee.

IN point of fact, the nine-man committee came as close to deadlocking in its report as could be done by an odd-numbered group. Five members signed a "majority favorable" report which in large measure vindicated the authority and its general manager, State Senator R. M. Jefferies. Four committeemen signed a "minority unfavorable" report which was critical of numerous actions of the authority and of Senator Jefferies. And one of the five majority members tendered a separate statement in which he concurred in nine of the 21 findings of the minority, thereby giving the investigation all the aspects of a split decision; indeed, almost a tie.

At the outset of the investigation, the committee agreed to steer clear of the government power-private power controversy, and to concern itself solely with the operational and financial aspects of the Santee-Cooper Authority alone. That policy was adhered to throughout the six months' investigation, and rarely did the group touch on anything affecting the merits or demerits of government power.

Government power considerations were involved in the investigation, however, for one major phase of inquiry related to Santee-Cooper's dealings with a combination of rural electric co-operatives organized into a 16-member Central Electric Power Co-operative. The contract by which Santee-Cooper agreed to supply that super co-operative with low-cost power over a 35-year period underwent considerable scrutiny from the committee, and prompted somewhat conflicting references in the majority and minority reports.

AS the investigation developed, it evolved into several fairly well-defined areas of inquiry. One concerned the Central Electric contract. Another involved the substantial overruns experienced in the construction of a new steam plant and a new office building. Still another concerned the effects of a continuing drought upon Santee-Cooper operations. In similar "act of nature" category was the impact of 1954's "Hurricane Hazel" upon the Santee-Cooper service area. And throughout all phases of the investigation ran the continuing question of managerial effectiveness and competency. Embodied in this area were the various steps taken by the authority in order to save money, raise money, or spread money in order to meet the financial crisis which became especially pressing in the 1954-55 fiscal year.

Senator Jefferies, as general manager, steadfastly contended that much, if not most, of Santee-Cooper's financial woes stemmed from the prolonged drought which severely hampered hydroelectric generation in the five-year period extending through June 30, 1955. He and his engineering staff introduced data aimed at establishing the fact that neither river flow nor hydro generation during that period was up to the levels which normally would have been expected.

The majority report of the committee observed that "it is obvious that the five-year drought has been a material factor in the authority's financial difficulties. . . . Even the most farsighted planning could

not have foreseen this deficiency which cost the authority from $3,000,000 to $6,000,000."

BUT whereas that observation was embraced in the majority report of the committee, it was qualified by a dissent by one member with respect to the effect of the drought. The dissenting member, furthermore, threw his support in this particular to the minority report, making it in effect the majority report with respect to the drought. This group acknowledged that the drought undoubtedly had been a contributing factor, but added "it was not as large a factor as management contends. The management has been too optimistic as to the amount of water it may expect for the production of electric energy by hydro power.

"The hurricane losses and drought losses are conditions which cannot be corrected by act of man. These conditions may continue or they may reoccur at any time during the existence of such a project, as might other unforeseen and costly acts of nature. Failure to map a long-range financial program to meet such setbacks is inviting financial difficulty. Prudent business management and ordinary foresight demand that such a program be in existence. Such has not been the practice of the authority."

(There was general agreement that Santee-Cooper sustained an out-of-pocket loss of approximately $250,000 from the damaging effects of Hurricane Hazel.)

THE committee was again in disagreement over the causes and effects of the construction cost overruns for the new steam plant and the new office building. The steam plant (added to provide the authority with a sizable quantity of firm power it could not depend upon from the hydro operation) was to have been fully financed by a $15,300,000 revenue bond issue, floated in 1950. When it was completed, however, the cost turned out to be $1,282,000 greater than anticipated, a situation which threw a terrific strain upon Santee-Cooper finances. Similarly, the construction of a new office building (in which was incorporated a control center for the Santee-Cooper system) resulted in an overrun of some $350,000. Both overruns apparently caught the authority by surprise and caused the investigating committee to wonder how the management had not been aware of the situation.

Five of the committeemen (the minority plus the dissenting majority member)

¶ *"THE South Carolina Public Service Authority, better known as the 'Santee-Cooper project,' has weathered another investigation, but not without having its knuckles rapped in several particulars. On the point of financial solvency—chief issue which prompted the legislatively authorized investigation—Santee-Cooper came clear, but the inquiry brought to light some serious questions affecting the authority's management. The investigation also disclosed that Santee-Cooper's present solvency resulted from drastic measures taken to preserve the authority's fiscal stability."*

commented that "the overrun on the steam plant is difficult to explain and impossible to justify. The board of engineers (created by the bond indenture to make periodic surveys of Santee-Cooper operations) was unable to place the blame for the overrun and we have been unable to do so. With the large group of engineers and consultants employed by the authority it seems inexcusable that such a large overrun should have occurred and that its existence should have been discovered at such a late date. It is our opinion that the authority, with some additions, could have made use of the old office building for several years longer. The new office building is a magnificent structure and appears to be well designed and well constructed. The point is that the authority did not have the money at the time to build the building."

THE other committee members found that the new office building was needed at the time, and that it is well worth the money put into it. Nevertheless, they observed:

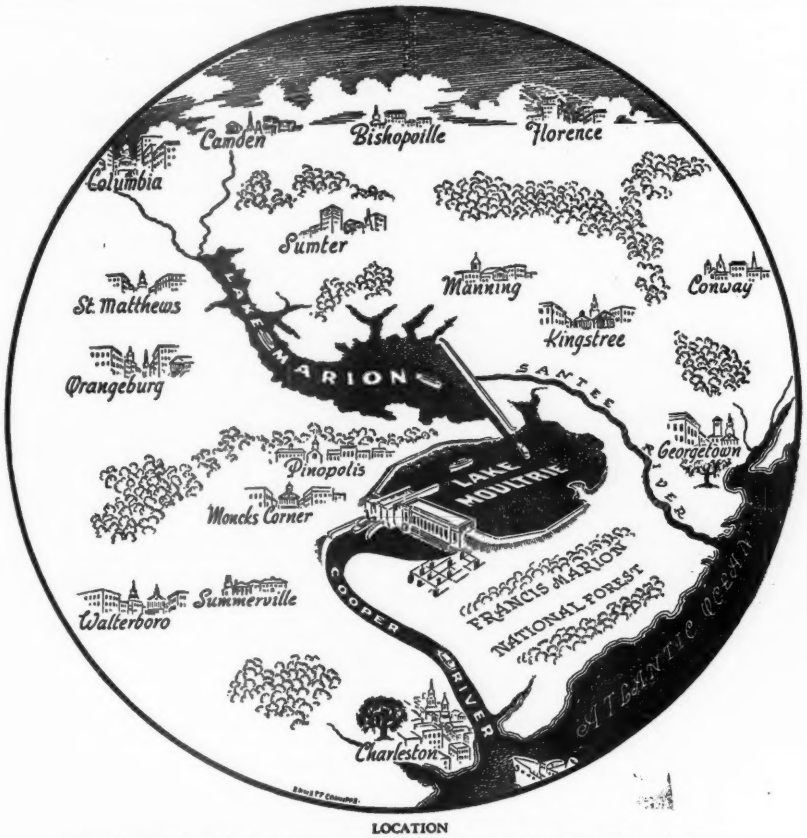
> Obviously someone failed to keep a careful check to keep the building within the budget figures. . . . It is passing strange that although the principal contractor knew the cost and the supervisor should have known it, that overrun was not known by the manager and the board of directors until the building was almost complete.

The same committeemen made substantially the same findings with respect to the steam plant overrun:

> It is obvious to us that the reason for the errors as to the overrun was due to erroneous estimates made by someone or a lack of proper or careful supervision. The board of engineers could not definitely fix the responsibility for this overrun other than the change orders, nor can your committee.
>
> The Korean War and the changes in the plans did affect the costs, but the authority had to rely on the advice of these experts and their supervision. Of course, the responsibility must ultimately be borne by the authority's management, but we are satisfied that a facility worth the amount expended has been obtained and that no funds have been dispersed unnecessarily. The board of directors and the general manager, as well as the engineer assigned to this project, should have ascertained the true cost of the plant, in all of the stages of construction.

THE contract between Santee-Cooper and the Central Electric Power Cooperative was termed unsatisfactory by all nine members of the investigating committee, despite the contention of a co-op spokesman that the contract was entered into as a fair and binding obligation between the parties. The arrangement grew out of negotiations between Santee-Cooper and Central whereby Central would borrow money from the Rural Electrification Administration with which to construct a vast network of transmission lines in lower and central South Carolina. Over those lines, Santee-Cooper power would be distributed to the individual REA co-ops, which in turn would distribute the power to their customers and members.

The contract embodied these features: That Central would purchase the power it needed from Santee-Cooper at 6 mills



LOCATION

Santee-Cooper is located in the following counties: Berkeley, Clarendon, Orangeburg, Calhoun and Sumter.
Nearest location to sea — 32 miles.
Distance to Moncks Corner from Power House — six miles.
Distance to Charleston from Power House — 36 miles.
Distance to Columbia from Head Lake Marion — 36 miles.
Distance to Power House from Main Line of A.C.L. Railroad — one-fourth mile.
Distance to Power House from U. S. Highway 52 — one and one-half miles.

per kilowatt-hour. That Santee-Cooper would "rent" the transmission lines from Central at a rental sufficient to repay interest and principal to REA. And that at the end of thirty-five years, by which the REA loan was to be amortized, the transmission network should pass into Santee-Cooper ownership.

The arrangement worked satisfactorily for a time, but when Santee-Cooper began to feel financial stress (by virtue of drought, overruns, etc.), the authority found itself in a two-way stretch: The 6-mill rate from Central was not bringing in a sufficient amount of money, and the payments due by Santee-Cooper for line rentals (to Central and thus to REA) were becoming hard to meet. Consequently, a three-way agreement was worked out among Santee-Cooper, Central, and REA

whereby a three-year deferment of payments to principal would be granted, along with a boost in the rate from 6 mills to 6.4 mills for the duration of the deferment.

WHEN the investigating committee raised the question as to the adequacy of a 6-mill rate in the light of present generation costs, Central's Manager E. V. Lewis replied that the rate was adequate for hydro power, and that hydro power alone was under discussion when the contract was signed. Lewis added that Santee-Cooper itself had benefited considerably by the Central contract, not only by having a large and firm customer, but by having access to a widespread transmission network over which it could move power to customers other than those connected with the Central system.

The committee, in effect, rejected those arguments and agreed in both minority and majority reports that the rate should be revised upward in the light of existing circumstances. The minority report, again concurred in by the dissenting majority member, had this to say on the subject:

> In our opinion a paramount factor causing the financial difficulty of the authority is the 35-year contract to sell power to Central. . . . We wish to state again that the authority should do everything it can within reason to furnish power to the farmers at a cheap rate. On the other hand, we believe that the farmers of this state are willing to pay a fair price for the power. . . .
>
> We find that the authority should never have entered into this contract to furnish power over a period of thirty-five years at a set price of 6 mills per kilowatt-hour. Entering into such a long-term contract to sell and deliver power at a fixed price based on current cost with no provision in the contract for future adjustment based on future cost is evidence of poor management. . . . We believe it urgent that steps be taken in the near future to see if some amicable solution can be worked out between the authority and Central so that the contract price at all times will be fair to both parties, and yet furnish power to Central for the use of the farmers at a rate which is reasonably cheap.

THE competency of Senator Jefferies' management was at issue throughout the entire investigation. The divergent opinions on this score were reflected not only in the split findings of the committee, but in the voluminous testimony presented to the committee. Several former top engineering officials of Santee-Cooper appeared personally before the committee to testify as to differences with the general manager, and of lack of confidence in his handling of the huge public power development.

Senator Jefferies sought to refute such charges through cross-examination (he was allowed that privilege throughout the investigation) and by the introduction of letters and memoranda indicating that he had counseled with the officials while they remained in Santee-Cooper employment.

Similar differences of opinion as to Senator Jefferies' capabilities as general manager also were revealed in the testimony of the Santee-Cooper directors before the investigating committee. Two members of the seven-man board told of having voted to oust him as general manager. Other members, however, either stayed "hands off" that issue because of relative newness on the board, or else gave

Jefferies a strong vote of confidence. The board's chairman, former State Senator James H. Hammond, of Columbia, said the general manager's constant fight in behalf of Santee-Cooper in the general assembly had been the salvation of the government power development.

THE general manager drew both commendation and censure from members of the investigating committee. The majority report found that he had "generally conducted the affairs of the authority in a satisfactory manner," adding that he was "particularly to be commended for the forthright manner in which he met the authority's financial crisis during 1954-55. In that latter respect, these are some of the measures by which that crisis was met:

1. Reduction in operating expenses, including the reduction of Santee-Cooper's work force, in the amount of $150,000.

2. Deferment of repayment of principal obligation amounting to $297,000 for a three-year period on the Central transmission line loan, coupled with an increase in the Central rate to 6.4 mills.

3. Sales of capital assets in the form of timber and land, totaling $628,000.

4. Reduction by approximately $300,000 in the schedule of capital improvements.

5. Increase in retail rates by 10 per cent in some categories of customers.

6. Use of a $685,000 carry-over from prior years.

7. Depletion of hydro energy, saving approximately $40,000 in fuel costs.

ALTHOUGH Senator Jefferies' management was accepted as satisfactory in the majority report, it drew sharp criticism from the four committeemen who signed the minority report. They were joined in several instances by the dissenting member of the majority group.

The minority report attributed the authority's financial difficulty, "among other things herein set forth, to management. By management we mean the general manager who is an employee, and we mean the board of directors who have full responsibility under the law to manage the property and business of the authority." The minority also criticized the management "for expenditure of large sums of money on nonessential projects. . . . for investing funds in projects against engineering advice. . . . for failure to utilize capable personnel to the fullest extent."

Another item of criticism, this time carrying the signature of five members,

¶ "THE *contract between Santee-Cooper and the Central Electric Power Co-operative was termed unsatisfactory by all nine members of the investigating committee, despite the contention of a co-op spokesman that the contract was entered into as a fair and binding obligation between the parties. The arrangement grew out of negotiations between Santee-Cooper and Central whereby Central would borrow money from the Rural Electrification Administration with which to construct a vast network of transmission lines in lower and central South Carolina.*"

related to Santee-Cooper's payment in March of 1954 of $200,000 into the state treasury. Such payments had customarily been made annually in years past in keeping with a provision of the act creating Santee-Cooper. That proviso directs that earnings over and above moneys needed for operation, debt service, or required reserves be paid over to the state treasurer "and shall be used to reduce the tax burdens on the people of this state."

WHEN time came to make that customary payment in 1954, the authority was in straitened finances, and the general manager was advised by some of his staff not to turn over the $200,000 to the state. The manager and the board decided to follow the usual course, nevertheless, and the payment was made. In the eyes of five members of the investigating committee, that decision was unwise:

> We find that the management is due criticism for paying to the state approximately $200,000 in March, 1954. The management had before it a letter from its comptroller which in very definite and positive words advised against this payment and pointed out the precarious situation which would result to its cash position if the payment were made. At that time, the authority owed approximately $1,000,000 in current accounts on the steam plant and office building, and this payment should have been withheld until the financial affairs of the authority were in better shape. This would have been in keeping with the act. We find no justification whatever for this payment.

The remaining four members of the investigating committee declared that "the desire of the authority to meet such a payment to help with the taxes of the state should hardly be open to criticism." They added, however, that "payments to the state should be made in the future only when the authority has funds over and above all foreseeable needs."

Another recommendation for the future proposed closer co-ordination, on a regular basis, not only between the directors and the top staff, but between the directors and the advisory board (comprising the governor and other chief officials of the state).

CONSIDERABLE attention was given during the course of the investigation to the propriety of the general manager's being a member of the South Carolina senate. Several members of the committee asked pointedly whether or not the joint tenancy did not contravene constitutional prohibitions against the occupancy of two positions of honor, profit, or trust at the same time. In answer to that, Senator Jefferies produced opinions from two successive attorneys general of South Carolina, holding that the general manager of Santee-Cooper was an employee rather than a state officer and therefore not guilty of dual office holding in the constitutional sense.

A special request for an opinion on a related point of dual office holding drew still another response from the present attorney general, T. C. Callison, upholding the right of the Santee-Cooper general manager to be a member of the legislature. Five of the nine members of the investigating committee, however, contended that the practice was wrong in principle. The minority group, plus the dissenting majority member, subscribed to this view:

The dual relationship obviously leaves the authority open to harmful attack on the ground that it is political in the sense of being involved in the mechanics of practical politics. . . . We believe that it violates the spirit of the Constitution, and we believe that it is injurious to public confidence. We, therefore, recommend that the act creating the authority be amended so that no member of the general assembly shall be eligible for appointment as an employee of the authority during his term of office.

SUCH legislation actually was proposed by two house members of the investigating committee during the 1956 session, but it failed to pass.

The investigating committee comprised three members of the state senate, all of whom signed the majority favorable report vindicating the management of their fellow senator; three members of the house of representatives, two of whom signed the minority report and the third of whom sided with the minority on many points; and three laymen appointed by the governor. One of the laymen signed the majority report; two the minority report.

Grouped by category, they were Senators Charles C. Moore, of Spartanburg, chairman; Rembert C. Dennis, of Berkeley (where Santee-Cooper headquarters are located), and Marvin E. Abrams, of Newberry; Representatives H. Curtis Edens, of Sumter; J. Malcolm McLendon, of Marion, and William H. Nicholson, Jr., of Greenwood, and W H. Arnold, of Greenville; Clint T. Graydon, of Columbia, and Dennis D. O'Brian, of Florence. Since the conclusion of the investigation, Senator Abrams (who leaves the senate this year) has been appointed to the Santee-Cooper board of directors by Governor Timmerman. He succeeds Elias T. McGee, of Anderson, one of the directors most critical of the Jefferies management.

SIX of the investigating committeemen are lawyers: Moore, Dennis, McLendon, Nicholson, Arnold, and Graydon. Two are farmers: Abrams and Edens. One, O'Brian, is an equipment dealer.

The committee employed as a special investigator a certified public accountant of Columbia, Wesley B. Edgar.

Facing Up to Facts

"OUR chances of survival—as men, as business executives, as a nation—depend on us alone; not on conditions beyond our control but on the intelligence and integrity we as individuals bring to bear on the problems we face in everyday life.

"As human beings, it is one of our faults to look upon the past with rose-colored glasses. We think, perhaps, our grandfathers had an easier time of it, that they did not have to face the stresses and strains of the twentieth century. But Hamilton and Franklin and the rest faced the pressing tensions of their day—the uncertainties, the fears, the all-important decisions—with precisely the same qualifications our modern leaders either possess or can acquire."

—EXCERPT *from Clients' Service Bulletin, published by The American Appraisal Company.*

To Sell Business Load, Pick Engineers!

Some engineers imagine a salesman must be a slicker, and they would not like that. But many have the temperamental qualifications, and enjoy selling—and the better salesmen they are, the better engineers they make.

An Interview with
O. K. BUCK*
As Told to James H. Collins

A GOOD popular quiz question almost anywhere in this country—and a stumper—would be, "Which do you think uses the most electricity here—homes or business?" The answer would generally be, "Why, our homes, of course—just think of all the electrical appliances used!" But that would be the losing answer in Los Angeles—and elsewhere—for commercial load is larger than domestic, and when trade and industrial loads are added together as business consumption of energy, the ratio is about 70 per cent business to 30 per cent residential.[1]

The home uses of electricity are promoted mainly by mass selling methods, such as utility and manufacturer advertising, and by the merchandising by appliance dealers.

A different kind of promotion is needed for business load—engineering skill, combined with sales ability that may be found or developed in engineers. It is not a common combination to find in a person; entirely contrasting kinds of abilities are essential—and selling must sometimes be done with "handcuffs."

Ordinarily, the normal steps of a sale are said to be: attracting a prospective customer's attention; making a presentation that meets objections and overcomes sales resistance; and, finally, securing the conviction that leads to a signature on the dotted line.

*Manager, commercial and industrial business, Los Angeles Department of Water and Power. For additional personal note, see "Pages with the Editors."

[1] Los Angeles 1955 figures:

	Revenue	*Kilowatt-hours*
Residential	$28,017,145	1,329,329,923
Commercial	30,759,132	2,053,408,194
Industrial	9,662,738	1,242,001,181

TO SELL BUSINESS LOAD, PICK ENGINEERS!

In selling business load, the power sales engineer generally has the attention of the prospect to begin with, because he has a problem. It is usually one of obsolescence or expansion; has probably been on his mind for a long time, or the sales engineer knows that it will sooner or later become acute. The customer calls upon him for technical advice.

The presentation is frequently made in a conference of friendly collaborators. There may be the customer's own people, plant or building engineers and managers, architects, electrical contractors, representatives of equipment concerns, and others. The utility man is limited to counsel on electrical supply, application problems and methods, and suggestions of changes that may be made in the customer's circuits, switchboards, and equipment. Recommendations as to specific makes of equipment that might lead to an endorsement of one manufacturer's item over others, or estimates of cost, will lead to trouble. In a nice way, these conferees keep the sales engineer in his place. He knows by experience that "stepping over the lines" will lead to unpleasant consequences later.

For example, "What is your idea of the cost of these changes?" is a natural question. The utility representative, constantly advising on hundreds of similar problems, could give a fair estimate. But if he did, and the cost exceeded his estimate, the customer might then get into an argument with a contractor or supplier, citing the estimate, and thus making enemies.

The sales engineer's presentation must carry conviction, and although others get the order for equipment, he is satisfied to jot down so much additional business load.

It is difficult to train ordinary salesmen in the complex engineering phases of this work. The engineer is often completely satisfied with his own technical analyses and not interested in promotion. The department's solution for this has been to find those engineers who have temperamental leanings toward selling—or that was the case until engineers themselves became so scarce a few years ago.

New business load is built on community growth—new factories, stores, and offices—and upon existing concerns overcoming obsolescence in them, which is nowadays a very large part of community growth.

During the war there were differences of opinion about after-war growth in Los Angeles. Some students of the future believed that peace would bring a letdown as the war industries stopped, and the war workers moved away. Others maintained that the war industries would be converted to peacetime production, thus making jobs for people to stay, and that there would also be a new tide of "immigration" to this region as the thousands of servicemen and women who had passed through Los Angeles would want to come and live here permanently.

The department took the view that there would be continued growth, and therefore an increased demand for electrical power. Expansion of its plant was based upon this premise, and the expectations were far exceeded. Young engineers were recruited and a sound foundation of engineering personnel was laid. Training classes in the elements of salesmanship were started for the engineers who were interested.

As time passed, it was learned that promotional abilities in technical men are more easily discovered by working with them

than by general training in salesmanship, or even psychological tests. This experience may be useful to others with the same objective.

WHEN one has worked with or supervised technical men long enough to know their characteristics, one finds that some have sales promotional leanings, while others simply do not. The latter are happier working as engineers, and are more productive that way.

The sales personality manifests itself in an interest in people, a desire to understand their views, to get along with them, to explain technical matters to them, and to avoid hurting their feelings. The technical personality, on the contrary, is sometimes brusque, regarding people and their opinions impatiently.

His interest in people leads the promotional man to want to help them with their problems. The owner of rental property may be losing tenants because his property is falling behind the times in electrical facilities. How much to modernize and how to finance the job, may be his worry. The electrical engineer can suggest various technical procedures, and will enjoy pointing out solutions.

Generally, after you have worked with engineers long enough to know them as human beings, this one characteristic of wanting to help people with engineering advice stands out plainly, and is an invitation for its development. It is desirable to put this proclivity to work on promotional problems.

"Which would you say adds the most new kilowatts to electrical service—new factories and stores, or old ones?" would be another difficult quiz question. People read about great new factories and supermarkets utilizing thousands of kilowatts of power in ultramodern installations, but seldom hear about the old structures that need more electricity in comparatively modest quantities. There are many more of the latter and they add up to the largest volume to work for and present the greatest number of engineering challenges. Tomorrow the new enterprise of today will be an old customer and will offer similar promotional opportunities.

NEW business load usually starts with a problem submitted by a present customer, or observed by the sales engineer in the field, as a situation that will eventually have to be dealt with.

Lighting, miscellaneous power, air conditioning, process improvements, electrical cooking and water heating, stand in that order in volume of new load from existing customers, and are the areas of load building to be watched.

¶ "THE *home uses of electricity are promoted mainly by mass selling methods, such as utility and manufacturer advertising, and by the merchandising by appliance dealers. A different kind of promotion is needed for business load—engineering skill, combined with sales ability that may be found or developed in engineers. It is not a common combination to find in a person; entirely contrasting kinds of abilities are essential—and selling must sometimes be done with 'handcuffs.'*"

Office buildings are a typical illustration. In downtown Los Angeles they range from thirty to fifty years in age, and when they were built, in the most desirable central locations, were the last word in electrical installations and were tenanted by the leading business concerns. But as the new office structures have arisen, the older ones have lost tenants through competition. Some of their tenants, such as companies occupying large space, have outgrown them, and have built their own company buildings. Even office buildings dating back only to the late prewar years are showing their age today, as new standards of lighting, elevator service, and air conditioning have come into prevalent use.

VARIOUS remedies for advancing obsolescence will be applied in such business buildings. There may be a face-lifting job in exterior modernization. Lighting will be put on office equipment circuits, switchboards will be overloaded, and makeshifts prescribed, until finally a day of reckoning comes and department engineers are asked to make an over-all survey and suggest a program. They have probably known about this situation for a long while and have been ready for it. They sit down with building management and engineers, architects electrical contractors, and equipment people, and offer over-all advice upon which the customer can proceed. A new switchboard and the transfer of loads from overburdened circuits; with revamped wiring which yields additional power for window air conditioners; improved lighting can prolong life, and with different classes of tenants, at attractive rents, the building probably has its original advantages, with a central location. The story may be varied, such as the purchase of the structure for complete modernization as the Pacific coast headquarters of some expanding outside company.

Obsolescence is crowding in on hotels, apartments, stores, places of amusement—in fact, about every type of commercial or industrial power user. Therefore, the promotional engineer keeps informed of the condition of buildings in his territory, and can in many cases anticipate the date when owners will require counsel.

A case in point was a large auditorium, popular for entertainments and meetings. Auditoriums were rebuilt utilizing air conditioning and other late advantages. The owners of the old place consulted the sales engineers on air conditioning, and were advised to change two small, overloaded power circuits to one new large installation. For several years the owners had balked at the cost (estimated by outside parties) but eventually action had to be taken. When the change was made, it marked up a nice additional load for the department, paved the way for the use of electrical cooking later, and enabled the customer to offer modern, comfortable facilities.

NEED for better lighting is the reason for many changes: The most common solution is that of increasing the light level in offices and other working places. To reduce fatigue from visual contrasts due to doing work at different brightness ratios, such as looking up from a desk lighted at one level to a darker or lighter room, requires more extensive treatment. Strain caused by improper lighting is becoming well recognized and brings demands for improvements in old buildings.

The safety engineer originates requests for counsel when, with his accident rate

Precision Voltage Required

"PROBLEMS *in [electric] current supply are becoming more interesting as new types of equipment are introduced, such as heat pumps, as recently applied to a medical building; or the electronic computer, which is being installed by a large insurance company. Fluctuations in voltage regulation were the main questions in each case to be probed. On the latter, department engineers met with the computer company representatives installing the device, the architects of the building, building engineers, and the manager. The computer engineers stated the limits of voltage variation, the electrical distribution system where the computer was to be installed was checked, and, upon the sales engineer's specifications, new equipment was selected which served the purpose.*"

rising, he investigates the different possible causes, and often finds that inadequate lighting is to blame. Better illumination of machines and work, and painting of surroundings in scientific color schemes, can reduce accidents.

The production engineer is likewise a "customer" when his spoilage increases beyond the allowable limits. A case in point was the nylon spinning plant, where thread was reeled on spools at a high rate of speed. It was necessary to watch this operation closely, to detect against breaks, due to uneven alignment. An improvement in the lighting of this work immediately lowered the "cripples."

SOMETIMES the production manager's problem involves quite a little trouble shooting because fluctuations in current are involved. The department finds it good practice to run them down, though the

fault may lie in the customer's distribution system, or other uses of power.

For example, a concern making plastic envelopes, sealed by an electrical welding machine, complained that the envelopes were either improperly sealed, or else burnt. The trouble was caused by voltage fluctuations in supply taken from a power circuit, and the customer was advised to connect the machine to a lighting circuit. Presumably that should have stopped the trouble, but it did not because there were fluctuations on that circuit, too, from other intermittently operating equipment. New light service drops from a different transformer bank were connected to this plant, and there was no further trouble.

Problems in current supply are becoming more interesting as new types of equipment are introduced, such as heat pumps, as recently applied to a medical building; or the electronic computer, which is being installed by a large insurance company. Fluctuations in voltage regulation were the main questions in each case to be probed. On the latter, department engineers met with the computer company representatives installing the device, the architects of the building, building engineers, and the manager. The computer engineers stated the limits of voltage variation, the electrical distribution system where the computer was to be installed was checked, and, upon the sales engineer's specifications, new equipment was selected which served the purpose.

BESIDES an interest in people, and a desire to help them with their problems, the typical sales engineer generally has a nose for news. He reads the papers and talks with others, to keep posted on what goes on. He often finds events moving in his direction and that his engineering experience is needed.

The news may be about a large order received by a concern making machine parts. It may be necessary to work three shifts, seven days a week, to meet delivery dates. That means added industrial load for the department—and some problems for the factory. More machines, changes in wiring, transformers, and other facilities may be needed—replacements to be made, while the plant is running. In one instance such changes were under way and everything was going nicely, when there was a delay on a wiring installation and it looked as though 150 employees would have to be laid off, with corresponding losses in production. Temporary service was rigged on some of the new machines and the crisis was passed.

Another novel "nonstop" situation was that of a paint manufacturer who was suddenly deluged with orders for a new "Do-it-yourself" paint of his own invention, which had no odor, filled cracks as it was used, gave uniform color on all kinds of surfaces, washed easily, and was readily applied. It made such a hit that he needed new paint-making equipment immediately, yet could not stop production. The co-operation of the sales engineer with the equipment manufacturer and plant manager, enabled the manufacturer to take full advantage of his success.

A LARGE food company operating a cannery decided to shift to production of pet foods—a popular line. The firm was operating a pet food factory in another western state and decided to move the machinery to Los Angeles and merge the two operations. The voltages of the two plants were different and advice was requested by

the plant management as to what to do.

Such routine items of news as adding a swing shift in a large assembling plant will call for engineering counsel, and will add several thousand kilowatt-hours.

COLOR has been a live issue in television almost from the beginning. When would it arrive? What would color sets cost? What kinds of programs would be available? Early promises were that "color" was right around the corner, only "this" or "that" was holding it back. Then the time had to be set further ahead. Department engineers knew that color would bring added load. Presently the Hollywood studios making TV pictures are receiving orders for color films, and are calling for more power—for the department, "color" had arrived.

From month to month, hundreds of the most diversified and interesting situations are handled that sooner or later build business load.

Under a new regulation, photographic records showing progress on government contract programs are required. Plant photographic departments need more current —modest amounts, but they add up the yearly volume.

For several years it had been known that plans were ready for lighting a football field for night games, pending the raising of money. The money is now in hand and the department has been called in to advise on the installation.

Only a trifling amount of energy is needed for a new "electric cow"—a coin dispenser for beverage milk—but such a device can grow into a large system.

THE department maintains files of information which are useful to new industries, such as records of plant sites available, which are often of great value in building industrial load. These records are kept up to date concerning every vacant industrial building in the city, from 1,500 square feet of floor space up, and show locations, rents, sale prices, transportation available, and other features. The information is so classified that while talking on the phone, it is possible to quickly answer any inquiry.[2] While these files are maintained primarily to serve new industries locating here from other parts of the country, they also serve as load builders when local industries move around within the city.

A local concern may move because growth makes larger quarters necessary; to own plant property instead of renting; to obtain advantages in transportation; to set up branch or bring scattered departments together; or the plant may be in the path of a new freeway.

[2] "Building Load with a Bunch of Cards," by James H. Collins, PUBLIC UTILITIES FORTNIGHTLY, December 7, 1950, p. 817.

¶ *"IF a young engineer has the ability and liking for the sales work and undertakes it, he will still be an engineer, and perhaps a better one. He will have to keep up with progress in the application of electrical energy in commercial and industrial fields. He will not only be a broader engineer, but he will have the satisfaction of being more directly helpful to industry and business."*

Such moving generally brings about the modernization of equipment and processes, and affords opportunities for increased load in electrical heat treatment, infrared baking ovens, electric cooking, and space heating. Abundant engineering data are available for the plant management's consideration.

National attention was given last year to a group of aircraft scientists who established themselves independently — the result of a policy disagreement. As the group wanted to get into business as soon as possible, department files were useful to them and the expectations were that such a new business would grow rapidly. From several properties suggested, a plant was selected.

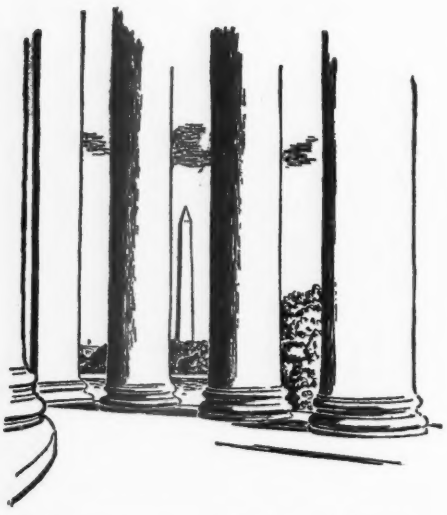
AGAIN and again an engineering investigation that was made for one concern will have wide application in industry. Several years ago one of the sales engineers designed an electrical heating system for keeping asphalt hot. This had formerly been done by steam, for which constant attendance of a boiler was necessary. Electric heating seemed to be too expensive, but the engineer devised a simple way to apply the heat by running an electric current through steel reinforcing bars imbedded within the asphalt pit. The cost of electric operation is much less than the fuel cost plus labor of attendance. This design has been adopted by paving companies all over the country—and the department is constantly being asked for details.

Recent development of in-plant feeding, as part of employee relations and working efficiency, has made electric cooking a very good producer of new load. Recently the first Los Angeles all-electric fire house was opened, with space and water heating, and an electric kitchen. A number of the latest telephone buildings are all-electric, with high-level lighting, air conditioning, and electric kitchens. Chefs are frequently taken on tours of electric kitchens—sometimes to show them various ways of arranging such facilities, for managing new kitchens being installed, and for their favorable decisions in adopting the electric methods.

At the University of California at Los Angeles, there has recently been established a course in restaurant management (using all-electric cooking) and it is believed that it is the first of its kind in the country.

IT may be well to add, for management as well as the young engineer, that this kind of salesmanship in building load is not even a reasonable facsimile of the variety deplored by technical men. There is no high-pressure salesmanship used; no undue influences created. Sales resistance is overcome because utility sales are based on service, engineering data, and solid facts. Decisions are made by businessmen for their own benefit.

If a young engineer has the ability and liking for the sales work and undertakes it, he will still be an engineer, and perhaps a better one. He will have to keep up with progress in the application of electrical energy in commercial and industrial fields. He will not only be a broader engineer, but he will have the satisfaction of being more directly helpful to industry and business.



Washington and the Utilities

Government Power Moved Ahead

THE Democrats in Congress had a field day on June 29th when they succeeded in blasting two controversial government power project measures out of committees, and quite possibly in time for final action before the session ends. The most surprising turn of events was the action of the House Public Works Committee in voting 18 to 16 to let the New York State Power Authority build a $425,000,000 power plant at Niagara Falls, New York. The committee rejected any idea of a compromise in the government *versus* private power controversy that has raged in New York state and Congress for more than six years. The bill approved by the committee was identical with the Lehman Bill, recently passed by the Senate. It contains the full-scale federal-type "preference clause."

The other trick won by the government power bloc on June 29th was the action of the Joint Congressional Atomic Energy Committee in approving the Gore Bill, calling for government construction of large-scale atomic power plants. The measure would authorize the Atomic Energy Commission to spend $400,000,000 to accelerate the nation's program for getting electric power from the atom. The commission, speaking for the administration, had opposed the measure. Chairman Clinton P. Anderson (Democrat, New Mexico) said the vote on the measure was 14 to 0. The four Republican Senators on the committee withheld their votes.

The House committee's action came as a climax to a number of confusing developments, to say nothing of misunderstandings and mixed signals. First, there was the testimony on the previous day of the counsel for Niagara Mohawk Power Corporation in announcing that his organization would agree to an arrangement to let the New York State Power Authority build the plant, provided that the preference clause was modified so as to give the New York companies some assurance that they would get a substantial amount of the power when the plants are built. He explained that his company's position had been brought under considerable pressure as a result of the recent rock slide in the Niagara gorge which wiped out two-thirds of the Schoellkopf generating plant.

When the Niagara spokesman was asked if he also spoke for the other four privately owned companies in the state, he was unable to say at the time. But next day Chairman Buckley (Democrat, New York) of the House Public Works Committee was able to produce a telegram of conformance signed by the other four company presidents. The New York State Power Authority was agreeable to the compromise on the preference clause. But the Republican Congressmen who have been fighting the battle along lines of private enterprise were confounded and considerably miffed.

On top of that somebody got caught flatfooted in committee so that, by a parliamentary maneuver, the so-called compromise was not even voted on. The committee first rejected, 20 to 14, an attempt to pass a bill that would have given the power development project to private enterprise. Even as the committee acted, tempers flared. Representative Gordon H. Scherer (Republican, Ohio), an advocate of private development of Niagara power, protested that he was "not given an opportunity to strike out the preference clause" in the bill. The preference clause gives priority to municipalities and cooperatives in buying the power that is to be produced at the forthcoming power plant.

Representative John A. Blatnik (Democrat, Minnesota), who presided at the committee session, said Scherer's motion to strike the controversial clause was sidetracked by a parliamentary move to vote directly on the bill. Buckley said he would try to get the bill cleared by the House Rules Committee for House action.

The atomic energy bill, sponsored by Senator Gore (Democrat, Tennessee), originally called for the construction of six differently designed atomic power plants in different parts of the nation. As approved, the bill specified no exact number of power plants to be constructed. But it authorized and "directed" the commission to carry out two different plant construction projects.

1. "As soon as practicable" the commission would be directed to contract for construction of "large-scale prototype power reactor demonstration facilities" capable of producing electric energy "in industrial or commercial quantities."

2. The commission would also be required to speed the development of new reactor designs showing significant technical advances. As soon as practicable after the designs are ready the commission would build smaller prototypes of no larger than 50,000-kilowatt capacity.

In addition, the commission would have responsibility for getting up as rapidly as possible an "international co-operation and assistance" program to help other nations with design, construction, and operation of atomic power plants.

The bill states that it is the policy of the United States to "accelerate" the civilian atomic power program and maintain leadership in atomic power technology. To accomplish the purpose it calls for construction of demonstration facilities for domestic use and foreign applications, as fast as is consistent with the atomic art. Its preamble states that the bill aims at advancing the international atomic agency and President Eisenhower's atoms-for-peace plan. Approval by the Joint Senate-House Committee sends the bill to the Senate and House for action. Power company spokesmen and other industrial executives have opposed the measure and it is sure to have strong opposition.

Anderson told newsmen he thinks the committee, engaging in a "good deal of give and take" in the terms of the final

bill, met the objections of private industry. That apparently referred to the requirement that the government-owned plants be located at AEC installations. The committee chairman said he believes the bill will "enable private industry to move more rapidly" in the field of atomic power. While no number of plants were specified in the final version of the bill, Anderson said the $400,000,000 authorization would finance three such plants. It was understood a late draft of the measure specified three large-scale plants and two of the 50,000-kilowatt type.

In view of the AEC opposition to the Gore Bill, it is believed that the administration may still fight it if President Eisenhower has to veto. A similar threat has been made from the Republican side with respect to the controversial Hell's Canyon bill to set up a high federal dam in place of the three private company dams licensed by the FPC. Democrats in Congress indicate they do not care about this happening as long as it gives them an issue to talk about in the campaign elections. The Republicans, of course, would prefer to fight off final action by Congress so as not to involve the President and blur the impact of any so-called "power issue" during the coming campaign.

The Gas Lobby Probe

THE investigation of the special Senate committee, headed by Senator McClellan (Democrat, Arkansas), on who lobbied for what during the passage of the now vetoed gas bill has not produced much excitement. In fact, comparing testimony of witnesses, including Walter Reuther, vice president of the AFL-CIO, it would appear that the argument is getting down to discussion of how much money was spent by various parties rather than the propriety of spending the same for such purposes. Reuther, who also heads the United Automobile Workers Union, admits that that organization spent $38,762.43 trying to defeat the gas bill, and frankly admitted that the union was lobbying. "I say very frankly to you: We were lobbying," Reuther declared. "We were trying to influence votes."

Attacking what he called "the oil and gas lobby," Reuther said its spokesmen were "long on cash and short on honesty" when they disclaimed any knowledge of lobbying. Reuther told Chairman McClellan he does not think the proponents of the gas bill "did anything illegal" in trying to advance it. But he said that, according to previous testimony, they used "consumers' dollars and tax dollars" to make their fight.

Needless to say, the committee members did not take very enthusiastically to the implied suggestion that a lobbying dollar spent by a labor union is any more pure than a lobbying dollar spent by gas and oil interests. But Reuther did make a distinction between straight lobbying and campaign expenditures which he regarded as pretty underhanded business. After comparing the Auto Workers' relatively smaller expenses with an alleged $1,700,000 spent on behalf of the bill, Reuther said that campaign expenditures are more significant than lobbying, although the two are closely tied. He said campaign contributions are "the key to the over-all problem of influence on legislation." He proposed that any adult be allowed to contribute $5 to one candidate for the Senate, the House, the presidency, and to one political committee—a total of $20 for a presidential year and $15 for each off-year election.

REUTHER's comments brought a quick rejoinder from Senator Barry Goldwater (Republican, Arizona). Gold-

water has contended in the past that Reuther's union is using compulsory union dues to finance political activities that do not jibe with the views of some of its members. Goldwater said Reuther was charging, "in effect," that every Senator and House member who voted for the gas bill "did so because he got a campaign contribution."

"I did not say that," Reuther replied.

"The inference is there," Goldwater said.

"I did not infer that," Reuther replied. He said he meant that "by and large" when the oil industry "subsidizes" a campaign with heavy spending the voting records of the candidate reflect it.

Goldwater also asked Reuther if he would not make the same "charge" against Senators the union supported—that they followed the union's views. Reuther replied that the UAW tried to give support to legislators who "on balance" worked for the public interest. The UAW, Reuther said, supported Senators who voted for the gas bill as well as Senators who were against it.

FORMER Mayor Alex M. Clark of Indianapolis testified that he, too, "was lobbying" as chairman of the Joint Committee of Consumers and Small Producers which spent $37,711 in behalf of the natural gas bill. But Clark took mild exception to Reuther's statement that other pro-gas bill groups were lobbying too. He said it is a "fine line" between lobbying and educational campaigns.

Clark said as the Washington director of the Consumers Committee he was, in effect, its policy maker. He contacted perhaps fourteen Senators and sent out mailings with "fact cards" on the measure. He said the group made no campaign contributions.

The committee also questioned Guy Nunn, UAW radio director, who makes morning and afternoon news broadcasts from Detroit, on a part of a broadcast made on the debate of the Case disclosure. Nunn's broadcast asserted that it had long been known that the oil "lobby" was "buying Senators by the bushel."

Nunn commented that he had "made more judicious statements in my time." He called the statement a "mistake," and he agreed with Senator John F. Kennedy (Democrat, Massachusetts) that its reflection on all Senators was unfortunate. He testified that he knew of no Senators who were "bribed" or "bought" as those terms would be used in court.

WHEN McClellan asked why Nunn had not used those terms, the commentator replied: "I would confess that I should have." But he declined to apologize for the statement, insisting that no apology was justified. When Goldwater joined McClellan in saying the Senate deserved an apology, Nunn offered to "swap apologies" with Goldwater. He contended that Goldwater, and other Senators, have made statements about the UAW and CIO which were just as "unflattering."

And so the hearings ended on an indecisive note of semiapologies and implied charges of "you're another." It is not surprising that a good many Congressmen are showing signs of being bored with the whole business. Meanwhile Washingtonians were chuckling over a cartoon which appeared in *The Washington Post-Times Herald,* showing the gas lobby waltzing around the prize-fight ring with the senatorial investigation, while a frustrated public squirms in a ring-side seat. The title: "It's Been Most Charming!" It could be, of course, that the press is disappointed in the very fact that there are no sensational developments to be reported.

Telephone and Telegraph

Victory on Reimbursement

THE fight to establish the principle that telephone companies and other utilities should be reimbursed from federal funds for facility removal costs ended in partial victory as the President signed the federal-aid highway bill (HR 10660) into law. In agreeing on a compromise bill, subsequently approved by the Congress for presidential signature, the House-Senate conferees dropped a 2 per cent limiting factor on the amounts of federal funds allocated to a project which could be used for utility reimbursement purposes.

The law, as finally approved, permits utility reimbursement by the state from federal funds in the same proportion as those funds are expended on the project. In other words, where the federal-aid share of a given highway project is so much percentage and state policy allows full or partial reimbursement, federal funds may be used for utility reimbursement up to the same percentage of the total amount of relocation expense. It denies payment only where it would violate the law of the state or some contracted obligation between a utility and the state.

As was stated in the conference report, the bill "recognizes the equity of reimbursing utilities for the cost of relocating facilities when required for federal-aid highway projects. . . . (It) makes it clear that it is the intention of the federal government to assume its proportionate share of utility relocation costs whenever a state allows such costs." Full implementation of this intention, however, cannot be fully achieved unless changes in state policy are secured by utilities in the 42 states where existing law or contract arrangements prevent reimbursement under the restrictions in the new federal highway law.

The conferees eliminated the 2 per cent restriction, which they felt was likely to create unnecessary "administrative difficulties." They stated that it could have caused inequities, particularly to small utilities and municipalities, and "in some instances resulted in failure to fully reimburse states which would otherwise have been reimbursed under the policy . . . of reimbursing states that pay relocation costs."

Louisiana Phone Rate Reduction Ordered

A RATE increase application of Southern Bell Telephone & Telegraph Company was rejected (June 23rd) by the Louisiana Public Service Commission, which then ordered the utility to reduce

its present Louisiana rates by $3,940,000 a year. Southern Bell had asked for an annual rate increase of $6,581,000.

In announcing that the commission's ruling would be appealed to the courts, W. K. Boardman, Jr., vice president and general manager for the company in Louisiana, declared that the action "in the face of a clear and urgent need for improvement in our Louisiana earnings . . . shows a shocking disregard of the facts."

The opinion written by the commission said that the company's position that its ability to sell its securities would be impaired if its Louisiana earnings were reduced was "ridiculous in view of the fact that every issue of common stock by Southern Bell is bought by the American Telephone and Telegraph Company of New York . . . no matter what the earnings are."

The company had maintained during hearings on the rate application that any decrease in rates would force "a severe cutback" in the presently planned $97,000,000 construction program for 1956-57. The commission's opinion called these statements "absurd" and said "it is not the duty of telephone subscribers to provide the capital with which Southern Bell conducts its business."

The commission said its ruling was the first since World War II on any Bell system company in the United States which resulted in a rate decrease.

Under the order decreasing rates, public pay-station rates were cut from a dime to a nickel, effective September 1st, and all Louisiana intrastate long-distance toll rates by 20 per cent, effective August 1st.

Western Union Rate Raise Asked

FCC has been asked to raise Western Union Telegraph Company rates to provide additional yearly revenues of about $11,400,000 beginning July 29th. The company proposed in its petition to boost telegram rates by five to 15 cents outside the so-called first zone, which would be enlarged from 75 to 125 miles. Night and day letter rates would be raised a corresponding amount, but the charge for additional groups of five words would be hiked a minimum of one-half cent and a maximum of one cent, depending on the zone.

Boosts in the charge on money orders would also follow the pattern set by the telegram increase, but the minimum rate henceforth would apply to money orders worth up to $20 instead of the present $15 figure. A company spokesman said the difference of $3,600,000 between the $11,400,000 rate increase requested and the $15,000,000 raise in wages the company must meet next year because of recently granted employee pay increases is expected to be made up by future rate increases on such services as international messages and commercial news wires.

FCC Telephone Accounting Rules Changed

SAVINGS will accrue to class A and B telephone companies subject to FCC jurisdiction as a result of changes made by the commission in its accounting rules. Under the new rules, construction jobs of authorized gross construction expenditures of under $10,000 could be charged directly to Account 100.1, Telephone Plant in Service. Formerly, such jobs have been charged initially to Account 100.2, Telephone Plant under Construction, unless they could be completed in less than two months. On completion, they were then placed in the Telephone Plant in Service account.

Comment received by the commission

on the proposed change showed the companies favored the change, recommending a $15,000 instead of $10,000 limitation. State commissions were divided in opinion and the Communications Workers of America opposed. In its order, FCC took the position that the effect of the changes on telephone company revenue requirements would be "minor."

WU's Junior Shareholder

WESTERN UNION is blushing proudly —and for good reason. It was named first choice as an investment by the nation's youngest financial wizard, 10-year-old Leonard Ross of Tujunga, California, who backed his judgment with cash. Ross announced his purchase June 29th during a tour of Western Union's high-speed message center at Los Angeles which serves the three-state area of Arizona, Utah, and New Mexico.

Young Ross, whose vast knowledge of Wall Street operations amazed the experts and won him $100,000 last May on the NBC-TV program "The Big Surprise," said he had invested $2,500 in Western Union stock after a careful survey of the market. It was his first purchase of any stock and the money used was a recent gift to him by the New York Stock Exchange.

Informed of young Ross' selection, Western Union President Walter P. Marshall said:

> We are delighted that Leonard Ross selected Western Union as his first investment. We welcome him as one of our youngest share owners and he can be assured that we shall continue to do our best to justify his faith in the company's continued progress and future. We are just beginning a new, electronic age which promises further revolutionary changes and advances in facsimile and other forms of communication, surpassing even the marvels of today.

"My decision," Leonard said, "was based on Western Union's remarkable progress in modernizing and mechanizing its operations, its expanding use of facsimile and microwave, and its steadily increasing sale of private wire and facsimile systems. While I do not try to predict the future prices of any stock, I believe Western Union has a tremendous growth potential."

Emergency Priorities for Telephone Service

THE FCC requested the assistance of the telephone industry in putting a priority system for essential private line service into effect, as of July 1, 1956. The system, which was worked out by the Office of Defense Mobilization in collaboration with the Bell system and USITA, as well as the FCC and other government agencies, is designed to provide for an orderly resumption of essential private line service which might be interrupted by a national disaster or other causes during a national emergency. As set up, the priority system differentiates three classes of users entitled to preferred service. The three classes of priority include, in broad terms, the following intercity private line users: class I, direct defense communication, including civil and military warnings, alerts, proclamations, etc.; class II, supplementary type of emergency information, such as reports of damages, civil defense activities, etc.; and class III, communications involving public health and safety, essential public services, maintenance of essential supplies, etc. Private line customers will be held responsible, beginning July 1st, for determination of priority classification of their usage on full or part-time basis.

Financial News and Comment

By OWEN ELY

Notes on Public Power Developments

THE annual report of the Bonneville Power Administration for the fiscal year ending June 30, 1955, disclosed that revenues reached a peak of $52,000,000, a 15 per cent increase over the previous year. This was largely due to installation of 443,000 kilowatts new capacity (four at McNary, three at Lookout Point, two at Albeni Falls, and one in Dexter). The federal investment in "capital assets and expenses allocated to commercial power" was about $1.4 billion. The Columbia river power system operated by Bonneville generated 62 per cent of the total energy produced by major utilities in the region, supplying 5.9 billion kilowatt-hours for use by members of the Northwest Power Pool and for industries and nonpool utilities served by the system. Deliveries of interruptible power to industrial customers were curtailed from the latter part of March to early May, 1956, due to low temperatures which delayed the spring runoff of flood waters.

Plans to make the federal grid available for wheeling nonfederal generation to load centers, wherever most economical and feasible to do so, were reported progressing rapidly. Joint studies are well under way to explore wheeling possibilities with the city of Tacoma Cowlitz projects, the Grant County PUD Priest Rapids project, the Portland General Electric Company Pelton project, and the projected Pacific Northwest Power Company Mountain Sheep and Pleasant Valley dams.

A SURVEY of rate structures and procedures was completed last November by Ford, Bacon & Davis and "is expected to be the basis for simplifying and streamlining rate schedules and procedures in line with current utility practices." Substantial savings in costs of dams and transmission equipment, together with sales of large quantities of dump power previously without a market, made it possible to extend the administration's basic wholesale power rate of $17.50 per kilowatt-year unchanged for at least another year, or through December 20, 1957.

An increase in revenues, but a decline in net revenues, was forecast by Bonne-

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ville for the fiscal years 1956-57. Thus, it was estimated that in fiscal 1956 (recently ended) only about 10 per cent of revenues would be carried to net compared with over 16 per cent in 1955, 19 per cent in 1954, and 40 per cent in 1952. Thus, repayments of power capital investment are being reduced, although still ahead of schedule. Thus far about 17 per cent of the government's investment has been repaid.

Projects built in recent years have been much more expensive than the earlier construction of Bonneville and Grand Coulee. As a result in the three years after 1952 revenues increased 30 per cent, kilowatt-hours 28 per cent, operation and maintenance expenses 37 per cent, depreciation 103 per cent, and interest expense 109 per cent. Total capacity of the system as of June 30, 1955, was 3,600,000 kilowatts as compared with 2,500,000 in 1952, when the only completed projects were Bonneville and Grand Coulee. The 3-year increase represented the completion of 285,000 kilowatts at Hungry Horse, 120,000 kilowatts at Lookout Point, 100,000 kilowatts at Detroit, 560,000 kilowatts at McNary, and 61,000 kilowatts miscellaneous units.

THE aluminum industry accounted for nearly one-third of 1955 revenues, compared with 51 per cent in 1945 and 42 per cent in 1949. Other industries contributed 13 per cent, publicly owned utilities 34 per cent, and privately owned 19 per cent. (See accompanying chart.) Sales of firm power to aluminum companies have remained fairly steady since 1948 despite the large increase in total sales. Much of the increase in output has gone to other utility companies and to miscellaneous industries, although the aluminum companies have received a moderate additional amount of power on an interruptible basis. BPA delivered 3 billion kilowatt-hours of interruptible energy to industrial companies in 1955, an increase of 17 per cent over the previous year.

During its seventeen years of operation BPA has sold power at an average rate of 2.39 mills per kilowatt-hour. Aluminum plants got the lowest rate, 2.15 mills, due to their very high load factor, which approaches 100 per cent.

Following are the scheduled additions to BPA's present 4,000,000-kilowatt capacity:

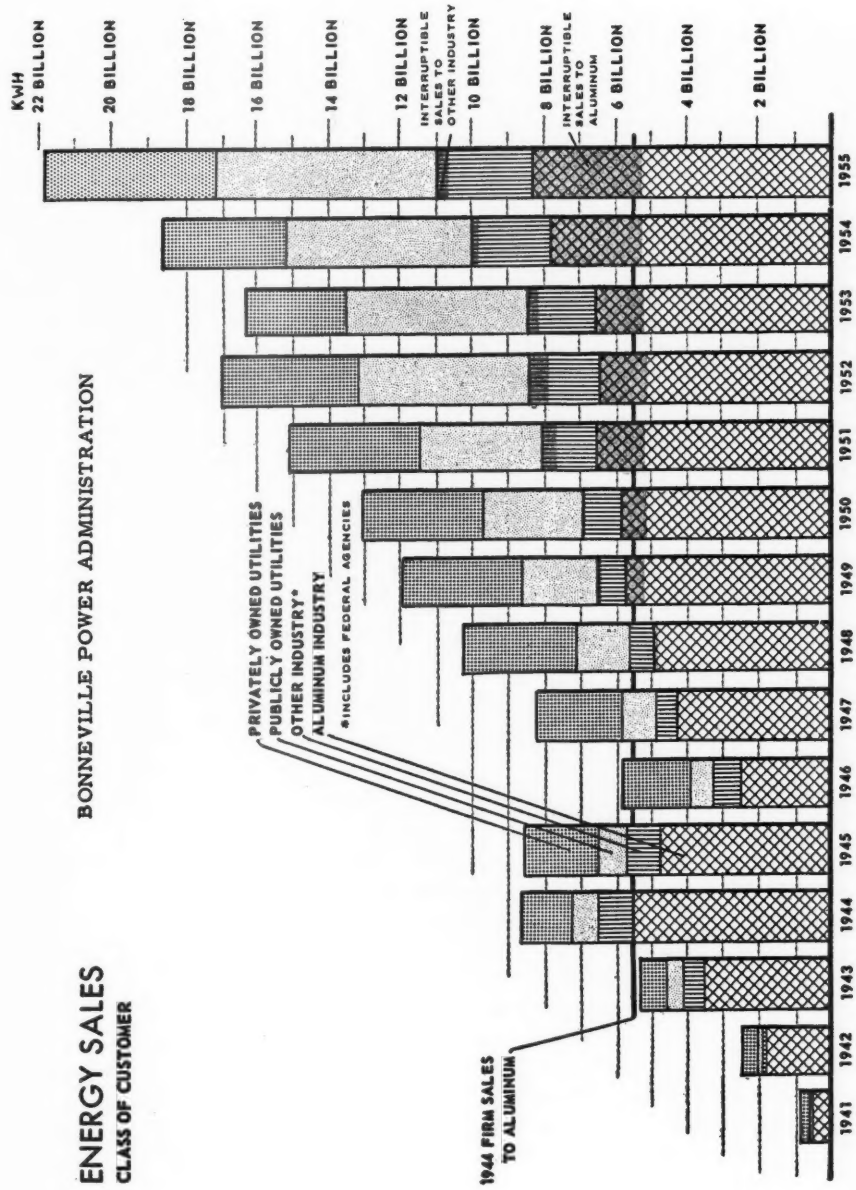
	Capacity Mill. KW	*Initial Date In Service*
Pending Projects		
Chief Joseph	1.0	Sept., 1955
The Dalles	1.1	April, 1957
Ice Harbor	.3	Dec., 1961
Authorized Projects		
Libby	.6	
Priest Rapids	1.0*	
John Day	1.1	

*See below re Grant County PUD.

If all of these projects (plus a number of small ones not listed) should be completed, the capacity of 24 BPA projects would approximate 9,800,000 kilowatts.

On June 5th, the FPC granted Puget Sound P&L a 50-year permit for construction of its $35,000,000 hydroelectric power project on Baker river in Whatcom and Skagit counties, Washington. Generating equipment at the new dam will have a capacity of 85,000 kilowatts, and 55,000 kilowatts will also be added at the Lower Baker station.

THE "partnership" projects for developing public power in the Northwest are making fairly good progress. Grant County PUD recently sold $166,000,000 Columbia river-Priest Rapids hydroelectric production system revenue 3⅞ per cent bonds due 2005. The district has entered into power sales contracts with Pacific Power & Light, Portland General Electric, Puget Sound P&L, Washington


ENERGY SALES
CLASS OF CUSTOMER
BONNEVILLE POWER ADMINISTRATION
KWH
22 BILLION
20 BILLION
18 BILLION
16 BILLION
14 BILLION
12 BILLION
10 BILLION
8 BILLION
6 BILLION
4 BILLION
2 BILLION
INTERRUPTIBLE SALES TO OTHER INDUSTRY
INTERRUPTIBLE SALES TO ALUMINUM
PRIVATELY OWNED UTILITIES
PUBLICLY OWNED UTILITIES
OTHER INDUSTRY*
ALUMINUM INDUSTRY
*INCLUDES FEDERAL AGENCIES
1944 FIRM SALES TO ALUMINUM
1941
1942
1943
1944
1945
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1952
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1954
1955
FISCAL YEARS

Water Power, the cities of Seattle and Tacoma and others, also PUD's in Cowlitz and Kittitas counties, for the sale of about 63.5 per cent of the electric output of the project. The district will retain 36.5 per cent for its own use. Name-plate rating of the Priest Rapids units will be 631,000 kilowatts.

At recent Federal Power Commission hearings, four public groups—the cities of Tacoma, McMinnville, and Eugene, and the Grant County PUD—supported the proposal of Pacific Northwest Power Company to build the Mountain Sheep and Pleasant Valley dams, a $213,000,000 project on the Middle Snake river designed to produce 1,400,000 kilowatts. Some 70 statements were entered in favor of the project, most of them pointing to the area's need for new power.

The $760,000,000 giant irrigation and power program on the Upper Colorado river has finally taken shape after many years of local agitation, due to the administration's strong support. This project is expected to bring water to 132,000 acres of semiarid land and add water to 234,000 acres already irrigated; and also to produce about 900,000 kilowatts of electricity.

In British Columbia the power commission is investigating the possibility of building a $200,000,000 hydroelectric project on the Homathko and Southkate rivers, which it is estimated would provide more than 1,300,000 horsepower. A dam on the Columbia river at Mica Creek, proposed some time ago, would have a potential of 1,500,000 horsepower.

HELL'S CANYON remains a political "hot potato," despite the fact that Idaho Power is proceeding with its program to construct three dams as a substitute for the one so-called federal high dam. Raymond Moley in "Perspective" (*Newsweek*, May 21st) has marshaled the arguments for the company project. It is estimated that the Idaho Power dams will cost less than half the amount of the federal high dam, and will deliver nearly as much power. The federal dam would take much longer to build, and would pay to various taxing units of government only about one-fifth as much over a 50-year period as Idaho Power would pay. Proponents of the federal dam are still busy in the courts and in congressional log-rolling. The U. S. court of appeals has denied the request of public power groups for an order stopping work on Brownlee dam by Idaho Power, pending a final decision.

THE Power Authority of the State of New York, in its twenty-fifth annual report issued in February, stated that the St. Lawrence project is on schedule and that the first power will be generated in a little over two years. Power will be sold to Aluminum Company of America, the state of Vermont, the city of Plattsburg, and the Plattsburg Air Force Base; marketing of the remaining power is under way and firm agreements will have been completed by the end of this year. An agreement was reached with Niagara Mohawk Power and New York State Electric & Gas for wheeling power to Vermont and Plattsburg.

Niagara Mohawk Power's Disaster

NIAGARA MOHAWK POWER on June 7th suffered possibly the worst disaster to befall any utility company in peacetime—two of its three hydro units at Schoellkopf station were completely demolished by a rock fall. The remaining unit (3A) was not directly hurt by the fall, but fires in the generators and a flood

from the disrupted waterways resulted in considerable damage. Engineers and geologists have been at work studying the damage to the remaining unit and the possibility of rehabilitation.

The company expects that is can recover some value through its fire policies on plant 3A (the remaining unit), but there seems little prospect of collecting insurance from the effects of the rock slide and flood. Early press reports of the disaster mentioned an estimated $100,000,000 cost of rebuilding and apparently the management feared that this figure

UTILITY ANALYSES PUBLISHED RECENTLY*

Company Analyses	*Firm*	*No. Pages*	*Issued*
American & Foreign Power	Pershing & Co.	1	April
American Natural Gas	White, Weld & Co.	6	April
Anglo-Canadian Telephone	Shearson, Hammill & Co.	2	May
Anglo-Canadian Telephone	Amott, Baker & Co.	3	Feb.
Brooklyn Union Gas	Argus Research Corporation	2	June
California Elec. Power	Thomson & McKinnon	1	Feb.
Central Hudson G. & E.	Josephthal & Co.	2	Mar.
Central Illinois P. S.	Argus Research Corporation	2	June
Central & South West	Argus Research Corporation	2	April
Cincinnati G. & E.	Josephthal & Co.	1	May
Cleveland Elec. Ill.	Argus Research Corporation	2	April
Cleveland Elec. Ill.	Sutro & Co.	1	May
Columbus & So. Ohio Elec.	Josephthal & Co.	2	Feb.
Commonwealth Edison	Argus Research Corporation	2	Mar.
Consol. Edison	Josephthal & Co.	1	May
Duquesne Light	Argus Research Corporation	—	—
Electric Bond & Share	Wiesenberger & Co.	4	Dec.
El Paso Nat. Gas	Clark, Dodge & Co.	2	June
El Paso Nat. Gas	E. F. Hutton & Company	4	April
Equitable Gas Co.	First Boston Corporation	7	May
Equitable Gas Co.	Argus Research Corporation	—	Feb.
Florida Power Corp.	Argus Research Corporation	2	June
Florida Power & Light	J. R. Williston & Co.	1	May
Gas Service Co.	A. C. Allyn & Co.	4	Jan.
General Telephone	Gerstley, Sundstrom & Co.	4	Mar.
General Telephone	Eastman, Dillon & Co.	5	Mar.
Houston L. & P.	Osborne & Thurlow	2	May
International Tel. & Tel.	A. M. Kidder & Co.	2	Feb.
Montana Power	Josephthal & Co.	2	May
Montana Power	L. F. Rothschild & Co.	2	April
Mountain Fuel Supply	J. A. Hogle & Co.	2	May
N. Y. State E. & G.	Josephthal & Co.	2	June
Niagara Mohawk Power	Argus Research Corporation	2	Mar.
Niagara Mohawk Power	Cohu & Co.	2	June
Northern Ill. Gas	Argus Research Corporation	4	May
Northern Nat. Gas	A. C. Allyn & Co.	3	Jan.
Northern States Power	Argus Research Corporation	2	Feb.
Pacific G. & E.	Argus Research Corporation	2	May
Pacific P. & L.	Ira Haupt & Co.	2	Mar.
Peoples G. L. & Coke	Argus Research Corporation	—	May
Scranton-Springbrook Water	A. G. Becker & Co.	4	Mar.
Shawinigan Water & Pr.	Dawson, Hannaford, Inc.	3	May
Southern Co.	Josephthal & Co.	1	May
Southwestern P. S.	W. E. Hutton & Co.	1	May
Tampa Elec.	Merrill Lynch, Pierce, Fenner & Beane *(Investors Reader)*	4	Mar.
Texas Ill. Nat. Gas Pipeline	A. C. Allyn & Co.	3	Feb.
Washington Nat. Gas	First California Company	2	Jan.
Wisconsin Elec. Power	Argus Research Corporation	2	May
Wisconsin Electric Power	Josephthal & Co.	1	April
Wisconsin Power & Light	Loewi & Co. (Milwaukee)	—	Feb.

*Similar lists appeared in the March 15th issue; in the November 10, August 18, May 12, February 3, 1955, issues; also in earlier years.

would be construed as the amount lost. President Machold made it clear that the book loss would be between $10,000,000 and $20,000,000, depending on whether unit 3A could profitably be rehabilitated. The maximum loss of $20,000,000 would include about $11,000,000 for buildings and generating machinery and $9,000,000 covering the canal, tunnel, land, etc., in connection with the diversion of water from the falls to the plant.

THE original cost of the Schoellkopf plant, with its installed capacity of 335,000 kilowatts, was $36,000,000, now written down to $20,000,000. Various portions of the Schoellkopf plant had been built during the years 1907-24 and the conversion of part of 3A was done during 1932-49. In the earlier years construction costs were of course only a fraction of present-day costs.

Even if the maximum loss of $20,000,000 should be written off the books, a substantial tax saving would be available—the exact amount cannot be estimated because the depreciation reserve based on the company's tax reports may be somewhat larger than that shown in its stockholders' books. In any event, it appears likely that the net loss after tax savings will not exceed $1 per share, reducing the recent book value of $20 to $19—a loss which would soon be recovered through retained earnings. This factor is not important, therefore.

More important to stockholders perhaps is the effect on current share earnings, but this is very difficult to appraise because plant revenues (and many elements of costs) were not segregated. President Machold has stated that he does not expect 1956 share earnings to drop below the level of last year's $2.22. As earlier forecasts for 1956 had approximated $2.30 or better, this would seem to indicate that the loss might be in the neighborhood of 8 cents for the remaining half year or possibly at an annual rate around 15 cents.

SALE of the industrial power generated at Schoellkopf was not made under contracts but under regular rate schedules filed with the New York Public Service Commission. These schedules provided for billing industrial customers on an "other than hydro" rate schedule if the power were not generated at Schoellkopf. The 20,000 cubic feet of water per second at Niagara Falls assigned to Schoellkopf under the company's federal license (granted in 1921 and expiring in 1971), which is no longer being used by Niagara Mohawk, can now be used by the Ontario Hydro-Electric Commission, for the time being, under terms of the 1950 treaty. The Ontario commission has not converted all its 25-cycle generating plants to 60-cycle, and hence has agreed to supply Niagara Mohawk with about 230,000-kilowatt capacity on a firm basis for at least three years. (Niagara also has some 25-cycle capacity at the old Adams plant, as well as at the Huntley steam station at Buffalo, which can supply part of the needed power.) This will take care of the industrial customers using 25-cycle power and it is probable that they will continue converting slowly to 60-cycle.

The company has not yet completed negotiations with the Ontario commission regarding the cost of purchased firm 25-cycle power (all previous purchases of electricity had been on an interruptible basis) but in our opinion such cost might be in the neighborhood of 5 or 5½ mills per kilowatt-hour. To compensate for this higher cost the company immediately began billing its 25-cycle customers at about 7 mills, except for power generated at the Adams plant. This will leave a margin

of about 1½-2 mills per kilowatt-hour to cover transmission and distribution costs, general overhead, taxes, and leave some contribution to shareholders. It is impossible to gauge the net result, but the company is hopeful that results will work out favorably; *i.e.*, without very much diminution of share earnings.

IN the meantime, the issue over the development of 1,100,000 kilowatts additional power at Niagara Falls (under the 1950 treaty) seems to be coming to a head after five years' delay. The New York State Power Authority, headed by Robert Moses, not satisfied with the job of building the St. Lawrence power development, wishes to be assigned the Niagara project as well. Niagara Mohawk Power and four associated utilities have for some years been planning to do this work, and two years ago the House of Representatives passed a bill assigning the project to the private utilities, which bill later died. Recently, the Senate passed the Lehman Bill assigning the project to the New York State Power Authority, and the House Committee on Public Works has reported out a bill in the same form as the Lehman Bill. However, it must also be cleared by the more conservative Rules Committee before it can reach the floor.

This bill contains the usual "preference clause" commonly inserted in federal power project statutes. Adoption of such a clause for a state project might well open the way for competing government transmission lines, municipal condemnation of private utility property, etc. The attorney general of New York state has expressed the view that the provisions of the Lehman Bill relating to preference in the distribution of power contravene the laws of the state of New York. This raises a serious question as to whether the State Power Authority could accept a license subject to such provisions. It is understood that Mr. Moses would like to see the preference clause removed from the bill. Doubtless government power proponents in Congress, however, consider it an important factor.

RECENT FINANCIAL DATA ON GAS UTILITY STOCKS

Rev. (Mill.)			*6/27/56 Price About*	*Dividend Rate*	*Approx. Yield*	*Share Earnings** — *Current Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Pipelines									
$ 4	O	Alabama-Tenn. Nat. Gas	19	$ .80h	4.2%	$1.41	7%	Mar.	13.5	57%	37%
15	O	Commonwealth Nat. Gas .	31	1.20	3.9	2.61	9	Dec.	11.9	46	45
16	O	East. Tenn. Nat. Gas. ..	10	.60	6.0	.68	21	Mar.	14.7	88	18
48	S	Mississippi Riv. Fuel	30	1.40	4.7	2.06	10	Mar.	14.6	68	52
69	S	Southern Nat. Gas	37	1.80	4.9	2.70	68	Mar.	13.7	67	33
200	O	Tenn. Gas Trans.	28	1.40	5.0	1.83	14	Mar.	15.3	77	22
163	O	Texas East. Trans.	26	1.40	5.4	1.97	31	Dec.	13.2	71	23
71	O	Texas Gas Trans.	22	1.00	4.5	1.93	19	Mar.	11.4	52	27
75	O	Transcont. Gas P. L.	17	.90	5.3	1.21	17	Mar.	14.0	74	19
		Averages			4.9%				13.6	67%	
		Integrated Companies									
127	S	American Nat. Gas	64	$2.20	3.4%	$4.15	16%	Mar.	15.4	53%	35%
50	A	Arkansas-Louisiana Gas .	19	1.00	5.3	1.30	182	Mar.	14.6	77	53
44	O	Colo. Interstate Gas	68	1.25	1.8	5.53	NC	Mar.	12.3	23	35
304	S	Columbia Gas System ...	15½	.90	5.8	1.36	28	Mar.	11.4	66	44
8	O	Commonwealth Gas	6	(a)	4.0a	.26	D51	Dec.	—	—	72
10	A	Consol. Gas Util.	15	.90	6.0	1.62	69	Apr.	9.3	56	53
240	S	Consol. Nat. Gas	40	1.70	4.3	3.04	12	Mar.	13.2	56	70
178	S	El Paso Nat. Gas	52	2.00	3.8	3.72	101	Mar.	14.0	54	22

40	S	Equitable Gas	28	1.50	5.4	2.15	13	Mar.	13.0	70	32
15	O	Kansas-Nebr. Nat. Gas	34	1.60	4.7	2.58	36	Mar.	13.2	62	32
88	S	Lone Star Gas	31	1.60	5.2	2.44	29	Mar.	12.7	66	39
23	S	Montana-Dakota Util.	25	1.00	4.0	1.48	10	Mar.	16.9	68	30
21	O	Mountain Fuel Supply	25	1.20	4.8	1.50	18	Dec.	16.7	80	59
72	S	National Fuel Gas	19	1.00	5.3	1.68	24	Mar.	11.3	60	58
108	S	Northern Nat. Gas	42	2.20	5.2	3.68	21	Mar.	11.4	60	34
37	S	Oklahoma Nat. Gas	27	1.40	5.2	2.33	39	Apr.	11.6	60	32
99	S	Panhandle East. P. L.	89	3.00	3.4	5.01	18	Dec.	17.8	60	32
11	O	Pennsylvania Gas	24	1.00	4.2	1.63	D10	Dec.	14.7	61	68
159	S	Peoples Gas Lt. & Coke	159	8.00	5.0	12.77	23	Mar.	12.5	63	40
31	O	Southern Union Gas	24	1.12	4.7	1.69	28	Dec.	14.2	66	34
215	S	United Gas Corp.	30	1.50	5.0	2.08	4	Mar.	14.4	72	41
		Averages			4.6%				13.3	62%	
		Retail Distributors									
23	A	Alabama Gas	35	$1.50	4.3%	$2.23	20%	Mar.	15.7	67%	44%
38	O	Atlanta Gas Light	27	1.20	4.4	2.75	25	Mar.	9.8	44	40
5	O	Berkshire Gas	15	.80	5.3	.97	111	June	15.5	82	37
4	O	Bridgeport Gas	28	1.50	5.4	2.35	23	Mar.	11.9	64	44
4	O	Brockton-Taunton Gas	14	.70	5.0	.85	30	Dec.	16.5	82	36
55	S	Brooklyn Union Gas	35	2.00	5.7	2.90	12	Mar.	12.1	69	47
1	O	Cascade Nat. Gas	10½	—	—	Def.	—	Dec.	—	—	41
33	O	Central Elec. & Gas	16	.80	5.0	1.58	14	Mar.	10.4	51	17
11	O	Central Indiana Gas	14	.80(b)	5.7	.96	D12	Mar.	14.6	83	64
5	O	Chattanooga Gas	6	.30	5.0	.43	34	Feb.	14.0	70	43
61	O	Gas Service	23	1.36	5.9	2.23	11	Mar.	10.3	61	38
6	O	Hartford Gas	36	2.00	5.6	2.50	15	Mar.	14.4	80	52
2	O	Haverhill Gas	19	1.20	6.3	1.66	21	Apr.	11.4	72	55
15	O	Houston Nat. Gas	25	1.00	4.0	1.82	D12	July	13.7	55	23
16	O	Indiana Gas & Water	19	1.00	5.3	1.59	23	Apr.	11.9	63	47
6	A	Kings Co. Lighting	14	.90	6.4	1.12	D6	Dec.	12.5	80	28
40	S	Laclede Gas	16	.72	4.5	1.20	22	Mar.	13.3	60	36
4	O	Michigan Gas Utils.	19	1.00	5.3	1.31	5	Dec.	14.5	76	43
4	O	MidSouth Gas	12½	.15	1.2	.72	71	Dec.	17.4	21	34
37	O	Minneapolis Gas	24	1.30	5.4	1.87	13	Mar.	12.8	70	38
14	O	Mississippi Valley Gas	19	1.12(d)	5.9	1.86	15	Mar.	10.2	60	28
5	O	Mobile Gas Service	25	1.00	4.0	1.41	11	Mar.	17.7	71	33
7	O	New Haven Gas	30	1.60	5.3	2.39	7	Dec.	12.6	67	65
10	O	New Jersey Nat. Gas	25	1.20	4.8	2.11	40	Mar.	11.8	57	31
70	O	North. Illinois Gas	18	.80	4.4	1.14	D4	Apr.	15.8	70	49
8	O	North Penn Gas	14	1.00	7.1	.83	D33	Dec.	16.9	120	57
183	S	Pacific Lighting	38	2.00	5.3	2.84	10	Mar.	13.4	70	44
15	O	Pioneer Natural Gas	25	1.32	5.3	1.89	10	Dec.	13.2	72	53
13	O	Portland Gas & Coke	32	1.00	3.1	2.04	49	Dec.	15.7	49	40
2	O	Portland Gas Light	11	.75	6.8	1.22	13	Dec.	9.0	61	25
8	A	Providence Gas	10	.56	5.6	.59	16	Dec.	16.9	95	64
3	A	Rio Grande Valley Gas	3	.15	5.0	.26	12	Dec.	11.5	58	63
3	O	South Atlantic Gas	13	.80	6.1	.89	12	Dec.	14.6	90	35
9	O	South Jersey Gas	26	1.40	5.4	1.69	7	Dec.	15.4	83	52
24	S	United Gas Impr.	38	2.00	5.3	2.33	10	Mar.	16.3	86	64
33	S	Washington Gas Light	38	2.00	5.3	3.22	23	Mar.	11.8	62	42
8	O	Wash. Nat. Gas	16	.40	2.5	.43	D20	Mar.	—	93	67
6	O	Western Kentucky Gas	13	.60	4.6	1.24	NC	Mar.	10.5	48	35
		Averages			5.1%				13.5	69%	

RECENT FINANCIAL DATA ON TELEPHONE, TRANSIT, AND WATER STOCKS

Rev. (Mill.)			*6/27/56 Price About*	*Dividend Rate*	*Approx. Yield*	*Share Earnings* Current Period*	*% Increase*	*12 Mos. Ended*	*Price-Earns. Ratio*	*Div. Payout*	*Approx. Common Stock Equity*
		Communications Companies									
		Bell System									
$5,297	S	Amer. T. & T. (Cons.)	180	$9.00	5.0%	$13.11**	8%	Feb.	13.7	69%	64%
245	A	Bell Tel. of Canada	47	2.00	4.3	2.43**	—	Dec.	19.3	82	63
40	O	Cin. & Sub. Bell Tel.	86	4.50	5.2	5.45	6	Dec.	15.8	83	100

187	A	Mountain Sts. T. & T. ..	127	6.60	5.2	8.80	17	Feb.	14.4	75	78
285	A	New England T. & T. ...	143	8.00	5.6	8.89	35	Mar.	16.1	90	60
715	S	Pacific T. & T.	139	7.00	5.0	8.67	21	Feb.	16.0	81	58
89	O	So. New England Tel. ..	40	2.00	5.0	2.11	D5	Dec.	19.0	95	64
		Averages			5.0%				16.3	82%	
		Independents									
4	O	Anglo-Canadian Tel. ...	30	$ .60	2.0%	$1.70	7%	Dec.	17.6	35%	48%
33	O	British Columbia Tel. ..	46	2.00	4.3	3.28	21	Dec.	14.0	61	28
2	O	Calif. Interstate Tel.	13	.70	5.4	1.04	NC	Dec.	12.5	67	34
13	O	Calif. Water & Tel.	18	1.00	5.6	1.46	20	Dec.	12.3	68	42
14	O	Central Telephone	24	1.00	4.2	1.98	24	Mar.	12.1	51	25
3	O	Commonwealth Tel.	15	.80	5.3	1.31	27	Dec.	11.5	61	32
38	O	Continental Tel.	36	1.20	3.3	2.25	38	Mar.	16.0	53	23
3	O	Florida Telephone	19	.80	4.2	.88	10	Dec.	21.6	91	40
210	S	General Telephone	43	1.60	3.7	2.63	27	Dec.	16.3	61	34
5	O	Inter-Mountain Tel.	14	.80	5.7	.95	9	Dec.	14.7	84	55
19	S	Peninsular Tel.	39	1.80	4.6	2.40	14	Mar.	16.3	75	46
19	O	Rochester Tel.	18	1.00	5.6	1.45	48	Dec.	12.4	69	34
3	O	Southeastern Tel.	16	.90	5.6	1.36	43	Sept.	11.8	66	42
8	O	Southwestern States Tel.	19	1.12	5.9	1.37	31	Dec.	13.9	82	42
28	O	United Utilities	21	1.20	5.7	1.70	12	Mar.	12.4	71	31
12	O	West Coast Tel.	18	1.00	5.6	1.55	28	Mar.	11.6	65	43
242	S	Western Union Tel.	19	1.00	5.3	2.10	39	Dec.	9.0	48	85
		Averages			4.8%				13.9	65%	
		Transit Companies									
22	O	Baltimore Transit	13	$1.60	12.3%	$1.27	120%	Dec.	10.2	126%	40%
13	O	Cincinnati Transit	5	.30	6.0	.34	16	Dec.	14.7	88	43
9	O	Dallas Transit	6	.35	5.8	.57	D48	Dec.	10.5	61	51
225	S	Greyhound Corp.	15	1.00	6.7	1.18	D12	Dec.	12.7	85	52
21	O	Los Angeles Transit	15	1.40	9.3	.94	D5	Dec.	16.0	149	89
27	S	Nat. City Lines	24	2.00	8.3	2.74	D1	Dec.	8.8	73	93
31	S	Fifth Ave. Coach Lines .	28	2.00	7.1	2.85	D3	Dec.	9.8	70	100
13	O	Niagara Frontier Trans. .	8	.15	1.9	1.47	—	Dec.	5.4	10	78
70	O	Phila. Transit	15	.30	2.0	1.27	390	Dec.	11.8	24	42
6	O	Rochester Transit	5	.40	8.0	.43	D2	Dec.	11.6	93	40
23	O	St. Louis P. S.	13	1.40	10.8	.68	D15	Dec.	19.1	206	91
16	S	Twin City R. T.	17	1.80	10.6	Deficit	—	Dec.	—	—	41
22	O	United Transit	6	—	—	1.03	94	Dec.	5.8	—	48
		Averages			7.4%				11.4	89.5%	
		Water Companies									
		Holding Companies									
34	S	American Water Wks. ..	10	$ .50	5.0%	$1.05	21%	Mar.	9.5	48%	16%
		Operating Companies									
4	O	Bridgeport Hydraulic ...	31	$1.60	5.2%	$2.04	12%	Dec.	15.2	78%	57%
11	O	Calif. Water Service	40	2.20	5.5	2.80	18	May	14.3	79	29
3	O	Elizabethtown Water ...	40	1.00	2.5	3.01	NC	Apr.	13.3	33	56
9	S	Hackensack Water	43	2.00	4.7	3.60	10	Dec.	11.9	56	37
8	O	Indianapolis Water A ..	41	.80	2.0	3.42	27	Dec.	12.0	23	33
5	O	Jamaica Water	35	2.00	5.7	2.83	D5	Mar.	12.4	71	25
4	O	New Haven Water	59	3.00	5.1	3.32	D3	Dec.	17.8	90	63
2	O	Ohio Water Service	27	1.50	5.6	2.46	56	Mar.	11.0	61	38
7	O	Phila. & Sub. Water	31	.50(e)	1.6	2.20	11	Dec.	14.1	23	29
2	O	Plainfield Un. Water ...	66	3.00	4.5	5.47	37	Dec.	12.1	55	40
3	O	San Jose Water	45	2.00	4.4	3.41	9	May	13.2	59	43
9	O	Scranton-Springbrook ...	17	.90	5.3	1.38	12	Dec.	12.3	65	31
4	O	Southern Calif. Water ..	14	.80	5.7	1.08	27	Dec.	13.0	74	34
3	O	West Va. Water Serv. ..	29	1.40	4.8	1.55	14	Mar.	18.7	90	17
		Averages			4.5%				13.7	61%	

A—American Stock Exchange. O—Over-counter or out-of-town exchange. S—New York Stock Exchange. *Earnings are calculated on present number of shares outstanding, except as otherwise indicated. **On average shares. (a)—Paid 4 per cent stock dividend. (b)—Paid 10 per cent stock dividend. (d)—Paid 25 per cent stock dividend. (e)—Also paid 5 per cent stock dividend. (h)—Paid 25 per cent stock dividend. NC—Not comparable. NA—Not available.

What Others Think

Notes on Recent EEI Convention

THE twenty-fourth annual Edison Electric Institute convention at Atlantic City got off to an auspicious start as the retiring EEI President Harllee Branch, Jr., noted an improved public opinion had created an atmosphere encouraging to utilities. The meeting was suitably climaxed by the announced formation of an atomic task force made up in part of utility experts to "co-ordinate, accelerate, and expand the development of nuclear power on a national scale."

The move served as an answer by the utility industry to advocates of government development of atomic power as contained in the Gore Bill (S 2725), now pending before the Joint Congressional Atomic Energy Committee, which would authorize construction of "six nuclear power facilities of advanced design in six different areas of the country."

The technical appraisal task force established by the EEI board on atomic power reactors, will include representatives of the electric utility industry, interested manufacturing companies, nuclear engineers, and scientists.

The board also endorsed the formation of a national evaluation group to provide a continuing means for the scientific, engineering, and economics of power reactor types and designs and selection of those which merit development and construction. Such a group could include representatives of government atomic agencies. It would supplement the task force and provide atomic know-how for the nation.

The action was taken on recommendation of the EEI's committee on atomic power. It was approved unanimously by the institute's directorate at its annual meeting held in conjunction with the annual convention.

The directors also called specifically for a conference of presidents of EEI member companies within ninety days, and named Max M. Ulrich a full-time executive secretary for the committee on atomic power.

Establishment of the task force was viewed by the industry as a solid step in the encouragement of electric utility companies to build atomic plants. With the skill and knowledge to evaluate the practicality of a certain type reactor, the group will be able to recommend construction to the industry. In the past, each company has made its own decisions on such construction.

REMARKS by various speakers during the course of convention addresses constituted other high lights of the session. B. L. England, president of the Atlantic City Electric Company, in discussing service responsibilities of the future, noted

that the rapid growth of the electric industry may outrun even the forecasts of the most optimistic. Stoppages of current could be so serious, in certain circumstances, as to approach the proportions of disaster. He added:

> It seems to me we have reached the point in history where we must do away with all the hampering results of parochialism in power. We must now interconnect our lines across the nation, bringing into being the economy and reliability of a national grid—an integrated national or even international power supply, forgetting state borders, the confines of particular regions—creating for reliability in peace and war a national network of power that can combine the resources of the nation, if need be, to cope with almost any emergency from wind, water, ice, storm, to the actions of an enemy.
>
> The reliability of electric service must become so assured that no customer, anywhere, need fear that the equipment with which he operates his home, his health services, his place of business, his community, his plant, or the facilities bearing on his nation's safety, will ever falter for want of power.

Representative Frank T. Bow (Republican, Ohio) told the convention that federal power agencies are disregarding the "plain mandate" of Congress in the Flood Control Act of 1944 by their failure to fix rates for electricity "according to sound business principles." In his view this statement applied to the Army Engineers, to the Department of the Interior, and to the Federal Power Commission, which, he felt, viewed the matter of rates for public power primarily from the standpoint of the short-term advantage for relatively few instead of the long-term advantage of all.

"This is largely because those who are beneficiaries of the existing discriminatory preference are so very vociferous," he said. "Rarely is a voice raised in behalf of the taxpayer."

With regard to charges for the use of money he noted that the Department of the Interior has used a figure of 2 per cent, yet "at no time has even the mere interest on the long-term Treasury borrowings averaged as low as 2 per cent." In the case of amortization of interest, another of the elements, the number of years allowed for amortization is greater than sound business principles would indicate justifiable, particularly in view of the potential for nuclear power. He pointed out, too, that the method of amortization is the reverse of what sound business principles dictate.

Congressman Bow said, with respect to the allocation of cost, "In the cases of federal multipurpose projects, it is necessary to make an allocation of cost against the power purpose or function. Clearly," he said, ". . . there should be allocated to power no less than is reasonable."

In the matter of taxes he commented on the fact that "some 10 per cent or so of all of the power consumers of the country are served with solely federal power and therefore . . . they contribute nothing at all toward the cost of the federal government. Something of the order of 20 per cent more of the nation's power consumers . . . are served partially with federal power and therefore . . . do not pay their *full* proportionate part of the cost of federal government service. The amount of federal tax which in this way is avoided must be made up by other federal taxpayers, mainly by the customers of private power companies."

In another session of the three-day meeting, Charles E. Parker, president of Central Surveys, Inc., backed up statis-

tically, statements made earlier by the institute's president, to the effect that public utilities are succeeding in winning the backing of public opinion over government utility ownership. He said:

> Perception is . . . a relative thing. The public sees a business not standing alone, but measured against many others. It values a business in terms of liking it "better" or "not as well," compared with other businesses.
>
> As to the electric power industry, the public's evaluation is emphatically in terms of "better." Wherever people are asked to compare this business with others, the electric power industry stands out for fine service at low cost, for quality of personnel, for citizenship in the community, and in other respects.

ACCORDING to figures presented by Mr. Parker, measurement of how the public reacts to conflicting claims and counterclaims shows that the electric power industry has come a very long and successful way in gaining public support. Twenty years ago a survey of voters by Dr. Gallup showed greater preference, by 2 to 1, for government ownership than for private ownership. Also, by nearly 2 to 1, voters favored an extension of the TVA idea to other areas in the United States. A *Fortune* magazine survey of the same period showed majorities in favor of government ownership of electric and gas service, as well as water. He added that there were near majorities favoring government ownership of telephone systems and bus lines.

He continued:

> The success of this industry's defense against more sweeping federal encroachment might suggest that we need to do no more. If we are winning, why change? Why do we need any sharper insight into public attitudes? And why do we need to do any better job of opposing government ownership than we are doing now?
>
> I think the answer may be that the whole problem has changed. Twenty years ago the problem was one of winning majority support to our side of the issue. But the problem now is the quite different one of trying to make that majority support effective.

Admitting that the public has little interest in the problems of utilities, Mr. Parker warned that people generally do not have firm convictions favoring private ownership.

"The industry needs no longer think [only] of defensive efforts but can consider action to regain much ground that has been lost in former years," he concluded.

DR. F. A. HARPER of the Foundation for Economic Education, Inc., described the use of the term "public utility" as applied to government ownership as "a most redundant redundancy." The circular thinking that led to the use of the term, in this connection, shows striking similarity to that which has produced the politigal "give-away" slogan.

He stated:

> Especially unfortunate have been the consequences of the invention of this phrase "public utility." It has created a whole chain of thinking which ignores its redundancy. From it has sprouted the notion of this special category of utilities—those utilities presumed to somehow apply peculiarly to the communal mass of humanity rather than to be the proper concern of persons as separate individuals. But as already explained, this concept of a communal mass is itself sheer nonsense from the standpoint of justice based on human rights. There is no such distinction between the utili-

ties of different economic goods and services. And so, in this strange anthropology of what passes for thought, it seems that a redundancy has now begotten notions that seriously endanger our traditional way of economic life.

Out of this chain of notions has come the idea that it is fitting and proper for the political agent of the communal mass either to own or impose arbitrary control over these "public utilities." It is argued that the public should thus control what properly belongs to the public.

If one asks how the public ever acquired the essence of ownership rights in these things, it will be said that as "public utilities" they really always belonged to the public anyhow; that when the government gained control of the "public utilities," it was merely regaining property that had been improperly surrendered to private ownership.

He stressed that these processes which are now so generally accepted and endorsed as justifying communal ownership or arbitrary control of "public utilities" must be recognized for what they really are—Socialism or Communism in sheep's attire.

MARK W. CRESAP, JR., executive vice president of Westinghouse Electric Corporation, said that improved communications between managers and labor leaders is a necessary step toward breaking through "the sound barrier in labor management relations."

No one can put on a dollar sign or apply a slide rule to find the answer to why managers and union leaders ought to know each other and communicate concerning their respective problems—but it is the key ingredient in the improvement of manager-union relations, and in the development of labor stability, Mr. Cresap told the convention.

Although the problem should first be tackled at the company level, efforts to improve management-union relations should not stop there, Mr. Cresap said. He continued:

> The accomplishment of better relations through intercommunication between management as a group and labor leadership as a group, on a national scale, is an objective to which industry might well turn its attention—even though the time may not yet be ripe for concrete action in this direction.
>
> One of the features of the American economy is the vast amount of communication accomplished in group meetings. In industry, meetings of individual industries like this one, have become a part of the process of doing business. Customers and suppliers in most fields meet regularly . . . But between management and union leaders the valuable intercommunication generated in such gatherings has been practically foregone. . . .
>
> The thought would be to provide a practical means for representatives of management and labor leadership to get together under relatively informal circumstances to talk over matters on which an exchange of thinking might be mutually helpful, and which might well contribute to a gradual improvement in the country's industry-labor relations climate.

IN his speech, Representative Frederic R. Coudert, Jr. Republican, New York), advocated a constitutional amendment which would require the government to keep the budget balanced except "in time of war declared by Congress or during a period of grave national emergency."

James F. Fairman, vice president in charge of engineering, Consolidated Edison Company of New York, Inc., told his

"NO THIS IS NOT A NUCLEAR REACTOR. IT'S A DINE AND DANCE JOINT!"

audience that the electric industry "must never forget that it is public consent that keeps us in business."

PUBLIC consent is a triangular affair involving company personnel, investors, and the general public, he said. There can be divergent points of interest, but the final decisions must fall within the perimeters of these three viewpoints if they are to endure.

In his view, the noise in the atomic field during the past year was typical of the American way of doing things and did not imply, as some observers might have concluded, that the electric utility industry was irrevocably split into two opposing camps, that the Congress and the Atomic Energy Commission would never agree on anything again, that the biologists and the physicists were locked in mortal combat.

In spite of the clamor, perhaps even spurred on by it, there has been steady progress, in Mr. Fairman's opinion.

He made this observation, however:

> The industry feels that competitive electric power from the atom cannot be forced in a hothouse atmosphere of government funds. Instead, it should be

handled like all the many successful innovations that have been adopted over the years. We can point to the successful introduction and on-the-job development of turbines, of pulverized fuel, of the alternating current network, of high-tension transmission as examples of the surest and swiftest way to follow in putting safe and efficient atom power on the line. We believe we are skilled in the practical application of new devices and methods.

Lured by early publicity, investors rushed into the atomic field as if it were another Klondike. Many of these ventures proved to be subcritical, in atomic terms. The head of one major manufacturing concern found it necessary to tell his stockholders that profits from hoped-for atom business were at least ten years away.

These early excesses are being ironed out and we are left with the impression that the investing community, and particularly their technical advisers, are fully aware of the atom's potential.

The general public is the remaining factor. The general public is not yet with us in the application of atomic energy to the generation of electricity.

MR. FAIRMAN felt that in the period between the present and the time the first nuclear-powered generating plants go into operation, the industry should "explain the facts of atomic life to the public." The job will not be easy, he noted, so long as there are two mental blocks in the public mind as far as atomic energy is concerned. As he observed them, "The first . . . is the original use of atomic energy as a destructive force. . . . The second block is the complexity of the subject."

Possible means of removing these mental blocks, suggested by Mr. Fairman, were to eliminate the emotional fear of atomic energy by more completely informing the public of the positive benefits of this energy as a new fuel, and to overcome the esoteric nature of the subject by making information about atomic energy "fascinating and human."

Donald S. Kennedy, chairman of the board and president of the Oklahoma Gas & Electric Company, was elected president of the institute by its board of directors for the coming year.

Resurgence of Private Water Companies in Florida

AN examination of Florida State Board of Health records discloses the burgeoning forth in large numbers of private utility companies to furnish sanitary service for new subdivision developments in that state, according to an article by John W. Greenleaf, Jr., appearing in the May, 1956, *American Water Works Association Journal.*

He defines private utility companies, for the purposes of his discussion, as those which have been created specifically to serve subdivision developments with water, sewerage facilities, and even gas, and which, generally, have been constructed concurrently with the subdivision development. According to Mr. Greenleaf, partner in the Rader Engineering Company, Miami, Florida, these private utility companies, in Florida, have usually been created to provide services beyond the reach of the presently established municipal systems and, in most cases, such systems have been constructed only after failure in obtaining service from the existing utilities of the nearest municipalities.

The records show that, since 1950, ap-

plications have been filed for 200 water systems, of which 150 have been for private utility companies. Sixty-five applications have been filed by private utility companies since 1950 for sewerage systems, which will ultimately serve a total of over 258,000 people. Mr. Greenleaf states that the growth of the private utility company has been one of gradual evolution. It was not until 1953 that the private company began to play a major rôle as a provider of sanitary sewerage facilities.

IN the beginning, the writer explains, the private utility company was created by real estate housing developers to serve as a parent for utility systems which had been constructed for housing projects and for which there was no community or municipality to take over operation and maintenance. Although the private utility company may be the creation of the real estate developer, he has little or no interest in the construction and operation of utilities, the writer points out. It is a field with which he is relatively unacquainted, and he would prefer to devote his capital and efforts elsewhere.

Occasionally, utility systems have been installed and put into operation by the real estate developer and then, upon the sale of the last house in the development, the system has been abandoned to an uncertain future, according to the article. To prevent this and to be certain that utility systems have the proper care and guidance, both the Federal Housing Administration and the Veterans Administration have required the establishment of trust deeds, which assure the continued ownership of the utility and guarantee its operation on all projects for which the administrations have insured loans. Mr. Greenleaf notes that the execution of such a trust agreement by the developer of the utility system is now required, and no final commitment can be made on a house to be constructed under a federally insured program until the construction of the utility systems has been completed and is certified to be in accordance with approved plans.

BOTH FHA and VA have recognized the increase in value of property brought about by the installation of water and sanitary sewerage systems, the writer declares. Although the exact increase in the value of a lot is dependent upon a number of variables, an increase of $150 has frequently been allowed by these agencies for the average-sized lot served from a community water system, and $250 is an average increase in the value of a similar lot where sanitary sewers have been installed.

This increase in the reasonable value of the property resulting from the installation of utilities has made it possible to attract the capital necessary for the construction of these utility systems, the writer asserts. It has also established a pattern under which the housing developer pays to the utility company a connection fee generally approximating the increase in reasonable value assigned to utility construction. This capital, unlike that of the housing builder, has to do with the long-term capital gains aspect of the investment rather than with quick turnover. Like the builder's capital, however, it must definitely be considered risk capital, according to Mr. Greenleaf, because the utility operator must invest the funds required to provide the necessary services for the building being constructed and to have these services ready at the time the buildings are completed and put up for sale.

Until the builder's houses are sold and occupied there are no customers for the utility systems and, therefore, no income. Because the rate at which the customers are added to the utility system depends en-

tirely upon the construction and sale of buildings, the time required to develop enough customers for a self-sustaining system is completely unpredictable, according to the author. Similarly, the period of time required to develop a return on the invested capital is unpredictable, as is the rate of return which may be developed. In view of these uncertainties, this type of venture capital demands and is entitled to a considerably larger rate of return than is normally considered equitable for more stable investments, the writer feels.

THIS, he remarks, is a different concept of financing from that usually considered in the field of sanitary sewerage construction, where general obligation bonds of a municipality or taxing district, or revenue bonds of an established utility, are frequently issued. Such bonds are usually tax free and enjoy a low rate of interest, the exact rate depending upon the history and reputation of the community involved. Also, the financing of a private utility company constructed to serve a subdivision is a different concept from the financing of a private utility company operating under a franchise within an established community. Mr. Greenleaf states that most such utility companies have entered into franchise agreements with established communities, where a number of customers could be assured at the outset and the returns on the investment calculated in advance with a reasonable degree of accuracy. This type of investment has long been considered conservative and the desirability of the particular investment is dependent largely upon the management policies of the company involved and upon the general economic possibilities and probabilities which the area served can offer.

Mr. Greenleaf, who has devoted much of his time to engineering work related to the planning, design, and supervision of constructing private utility systems serving subdivisions, says that probably the outstanding difference between the design problems in normal municipal work and those found in the design of private utility systems serving subdivisions is one of economics. Each private utility development, either through direct or indirect revenues, must be able to meet its operation and maintenance costs if it is to continue providing the necessary service. The writer adds a second requirement; namely, that in order to attract the capital necessary for the construction of such utilities, operating revenues must, within a reasonable period, be sufficient to pay a return on the invested capital commensurate with the risk involved. Payment of operating and maintenance costs, insurance, taxes, depreciation, and other costs, as well as the necessary return on the investment, must all come from operating revenues. These revenues are dependent on rates charged for the service provided, which, in turn, are predicated upon the rates charged by municipalities in near-by areas. Such municipal rates, the author explains, are frequently based on utility systems installed during periods of lower construction costs and on the lower interest rates of the tax-exempt municipal securities.

IN Mr. Greenleaf's opinion, economic considerations limit the minimum size of utility systems which can be built and operated independently. They also frequently limit the extent and type of treatment which can be provided, particularly in the smaller installations. He points out that, for economic reasons, a utility must be designed and developed to employ a minimum of personnel for operation, and the capital cost of construction of the utility systems must be consistent with eco-

nomic operation and maintenance.

Mr. Greenleaf also stresses the care that must be used in the analysis and interpretation of cost data covering any proposed private utility system. A table which is reproduced in his article shows variations in the costs reported by seven different private utility companies presently operating water and sewerage systems in the south of Florida. The author notes that the minimum investment per lot is $562.86, and the maximum investment per lot is $1,393.47, with an average cost of $830 per lot based on construction for 4,682 lots and a total cost of $3,880,000. Contributions from builders to these utility companies vary from a minimum of $350 to a maximum of $500 and Federal Housing Administration and Veterans Administration increases in reasonable value, for the companies reporting show a variation of from $300 to $475 per lot. The portion of total cost represented by the builders' contribution varies, according to these figures, from a minimum of 35.8 per cent to a maximum of 69.3 per cent, averaging 54 per cent for all of the utility companies involved. It is of interest to note that the lowest percentage is for the highest contribution, and the next to the highest percentage is for the lowest contribution. It should be pointed out, the author explains, that the costs as shown by this table included such items as land, legal, engineering, administration, interest, and other costs which are frequently overlooked in the preparation of preliminary estimates but which are a real and substantial part of the investment that must be made by the utility company.

MR. GREENLEAF concludes that the rapid development of the private utility company serving subdivisions has been greeted with mixed feelings by governmental officials and the public. "Everyone is in favor of providing safe water supplies and sanitary sewerage systems to the new homes under construction in suburban areas, but, as more and more private utility systems serving subdivisions are constructed with individual sewage treatment plants, there is increasing apprehension that this may not be the answer to the problem. . . . It is therefore particularly important that the engineer, owner, and operator take all steps required to ensure first-class service to the consuming public and to eliminate any possible cause for criticism. The engineer is further charged with the responsibility of designing a distribution and collection system of these utilities in such a manner that they may one day be incorporated in an over-all system operated by the municipality or by a metropolitan district."

Mr. Greenleaf is of the opinion that there is no need for apprehension regarding the construction of private subdivision utility systems if the public official is awake to the opportunities and responsibilities associated with this development. If he will carry out the necessary engineering studies required to provide a program for future development and if he will control the development of such utility systems through the issuance of franchises, then development by the private utility company of water distribution and sewage collection systems, with their paying customers and established revenues, will provide the means whereby financing can be obtained and integration of the private systems can be accomplished by a single large program of financing and construction or by a progressive program, according to the particular needs. In short Greenleaf believes that the private subdivision utility company is today fulfilling a definite need in the rapidly expanding economy of Florida.

—E. W. P.

The March of Events

Great Lakes Commissioners Plan First Meeting

GEORGE R. PERRINE, chairman of the Illinois Commerce Commission and president of the newly organized Great Lakes Conference of Railroad and Utilities Commissioners, has announced that the first annual convention will be held at the Greenbrier Hotel, White Sulphur Springs, West Virginia, November 29th and 30th.

The Ohio commission will act as the host commission for the convention and with the West Virginia commission is planning a full and interesting entertainment program.

Reservations should be made directly with the Greenbrier Hotel, White Sulphur Springs, West Virginia.

Similar to other regional groups within the NARUC, the membership of the Great Lakes group includes the states of Minnesota, Wisconsin, Illinois, Indiana, Michigan, Ohio, West Virginia, Pennsylvania, and New York. The officers of the conference are, in addition to President Perrine, Ralph A. Winter, Ohio, vice president; and John B. Conly, Pennsylvania, secretary-treasurer. The officers are *ex officio* members of the executive committee and two additional members are Ewald W. Lund, Minnesota, and Richard H. Balch, New York.

Alabama

Directors Win Court Writ

A WRIT of mandamus ordering Alabama Gas Corporation officials to permit company directors to copy names and addresses of stockholders from official records was issued in the circuit court at Birmingham late last month.

The order, issued by Judge J. Russell McElroy, had been sought by two directors of the company who claimed they had been denied access to stockholders' lists.

Attorneys for the gas company held that under regulations of the Securities and Exchange Commission governing proxy contests, the directors were not entitled to the lists. They promptly announced they would appeal the decision to the state supreme court.

The court found that while the two stockholders possibly intended to use the stock list in soliciting proxies, they also wanted to use the list to aid them in communicating with stockholders on other company matters.

California

Gas Rate Increase Application Filed

SOUTHERN COUNTIES GAS COMPANY last month filed an application with the state public utilities commission for permission to raise rates to return the company $4,737,000 a year—before taxes. If granted, the increase would not go into effect until 1957.

The proposed increase would add an average of 45 cents a month to the bill of the company's typical residential consumer. The company serves more than 560,000 customers—residential as well as industrial—in San Luis Obispo, Orange, Santa Barbara, and Ventura counties, and in parts of Los Angeles, San Diego, Riverside, and San Bernardino counties.

Of the total amount sought, nearly 55 per cent, or $2,587,000, would go toward federal and state income taxes, and franchise payments to local governments.

District of Columbia

Board Approves Transit Sale

DIRECTORS of Capital Transit Company formally have agreed to sell the line to a group headed by New York airline executive, O. Roy Chalk, for $13,540,000. The District of Columbia government has already given its blessing to the Chalk group's plan to take over the transit firm when its operating franchise expires on August 14th. The only remaining hurdle was the submission of the plan to House-Senate conferees, who were considering conflicting Senate and House bills dealing with the transit problem.

Under the agreement signed on June 30th by Capital Transit and Mr. Chalk's TCA Investing Corporation, Capital Transit will sell its property to TCA for $13,540,000, of which $9,600,000 will be paid in cash and the remaining $3,940,000 in 5 per cent 15-year notes.

Georgia

Transit Fare Increase Asked

ELIMINATION of special token rates and an increase in charges on numerous suburban lines have been requested by the Atlanta Transit Company. The request was made in a recent letter to the state public service commission.

Transit company president, Robert Sommerville, said the firm is at present "operating at a loss." He said the increase was necessary because of new wage boosts recently granted transit employees, because of new taxes being written into the federal highway bill, and because of increased maintenance costs.

The basic 15-cent fare on Atlanta lines would be continued, Sommerville said. And the company would continue to sell tokens, but at 15 cents straight instead of four for 55 cents, he added.

Illinois

City Attacks Rate Petition

THE city of Chicago recently attacked a petition by the Peoples Gas Light & Coke Company before the state commerce commission for an automatic rate adjustment to reflect changes in natural gas costs.

The special assistant corporation counsel urged the state commission to dismiss the company's petition. He warned the rate adjustment was a scheme to siphon revenue from Peoples Gas to the pipelines, subsidiaries of the gas utility, which he said were beyond the commission's jurisdiction.

"If the petition in this case were allowed and the company permitted to adopt a sliding scale of rates dependent upon its costs from natural gas purchased, a vicious precedent would be established to destroy all effective control of rates by this commission," the special counsel said. "The record shows that complete control of the natural gas companies that supply gas for distribution in the Chicago area is held by Peoples Gas."

The commission continued the hearing to July 17th, at which time it was expected to rule on the city's motion.

Maine

Seeks Rate Increase

A PROPOSED average rate increase of about 5.3 per cent for its 266,600 customers was filed with the state public utilities commission last month by Central Maine Power Company. The increase would take effect after thirty days unless suspended by the commission. Such a suspension and a public hearing are probable, however, although no date for hearing has yet been set.

Under the proposed revision, a residential customer would pay $3.64 instead of the present $3.52 for 50 kilowatt-hours of electricity a month and $5.14 instead of $5.02 for 100 kilowatt-hours. The minimum monthly charge for residence service would remain at $1 for six kilowatt-hours or less.

The proposal also includes gradual elimination of a special discount for customers who heat their homes entirely by electricity.

New York

Commission Report

UTILITY rates in New York state rose a total of $12,299,000 in 1955, the state public service commission reported last month. The increase, the bulk of which was attributable to higher telephone rates, was the third lowest since 1947, when utility rates began an upward spiral.

The report, submitted by Chairman Benjamin F. Feinberg to Governor Harriman and the state legislature, showed that utilities sought rate increases totaling $42,539,850, of which $15,938,600, or 38 per cent, were granted by the commission. Rate reductions aggregated $3,639,640, leaving a net increase of $12,299,000 for the year.

Small changes occured in gas and electric rates. The report stated that the unit cost of electric service to the majority of consumers still is substantially below that of 1940. There was a net electric rate increase of $57,900 and a net increase of $380,200 in gas rates.

Ohio

May Vote on Electric Rates

VOTERS of Columbus probably will be asked to approve a one-year ordinance-contract with the Columbus & Southern Ohio Electric Company which will continue the present electric power rates. Such a step was indicated by City

Utilities Director Fred M. Pickens after he received a letter from Harry M. Miller, president of the company.

The firm's contract with the city expires on November 15th. A new rate schedule must be set either by the state public utilities commission or a vote of the people. Pickens favors the latter.

Action must be taken by the Columbus city council by August 5th if the matter is to be placed on the November ballot. Pickens indicated he would draft such an ordinance and then go into the company's operations more thoroughly to determine what rate change, if any, should be made.

The city may study the company's operations with the thought of a cost-of-service franchise similar to one recently negotiated with the Columbus Transit Company, under which automatic rate changes are permitted to maintain a specified profit level.

The electric company said it could not make any definite statements on any new rate schedules until after the first of the year. The present rate contract was approved by Columbus voters in November, 1950.

Miller's letter cited cost increases to the company ranging from 16 to 95 per cent. He also reminded the city that the 1950 contract reduced rates approximately 15 per cent on an over-all basis and nearly 20 per cent to residential customers.

Tennessee

Electric Rate Cut Announced

AN across-the-board rate reduction, bringing estimated savings of $136,000 a year to nearly 11,000 consumers, was announced recently by the Clinton Power Commission. The electric rate cut was effective with all bills sent out after July 1st.

Manager E. H. Hamilton, making the announcement for the power commission, said the cut would affect all classes of consumers, residential, commercial, industrial, and others.

He explained the Clinton Power Commission brings electricity to people in parts of six counties, including the towns of Clinton, Andersonville, Lake City, Norris, and Oliver Springs.

Washington

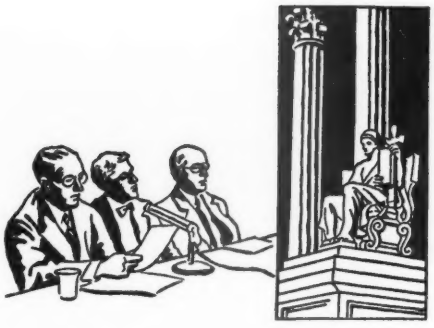
PUDs End Fight

A "DECLARATION of peace" was issued last month by the two public utility districts which have been feuding over Columbia river dam sites.

Commissioners of neighboring Douglas and Chelan County Public Utility districts declared they will adhere to a "harmonious and active working relationship toward development of our water resources to the joint interests of both districts."

Several weeks ago the Douglas district filed a protest with the Federal Power Commission over the Chelan PUD's proposed Rocky Reach project, to be built a short distance upstream from Wenatchee. The Douglas commissioners contended the pool behind Rocky Reach would interfere with Douglas county's proposed Wells dam.

The joint statement said the two public power agencies agree both dams are needed for the best development of the river and the area. They said they would "accept and abide by the decision of the FPC."



Progress of Regulation

Trends and Topics

Views on Commission Action and Responsibility

THE public utility commissioners gathering this month for the annual meeting of the NARUC will hear reports on regulatory problems such as rates, valuation, depreciation, service, and financing. Bypassing those weighty subjects, it may be of interest to mention a few topics pertinent to commission activities. Can a commissioner be sued for damages because of his decision? What about outside influence and prejudice, or criticism of the Supreme Court? How many commissioners must be present at hearings, or must join in making an order? All of these questions have been considered by court or commission.

Damage Claim against Commissioner

Can a commissioner be held liable for damages because of a wrong decision? That question came before the New Jersey supreme court when the owner of land affected by a change in a grade crossing sought to recover damages from a railroad, a construction company, the commission, and the individual members of the commission. The court applied the general rules as to suits against a state without permission by the state and said that the commission was an "alter ego" of the state and as such could not be sued as a separate entity or body.

As to the individual members, the court said that the realty company would place the burden of determining the constitutionality of an act of the legislature upon the commissioners at their peril. There had been a contention that an application to the government for a grant to aid in the cost of the construction of a crossing elimination was illegal and that a state law was unconstitutional. The court said there was no merit in the claim against the board members. They acted in concert in the performance of a public, statutory duty. There was no allegation that they were actuated by motives of private gain, oppression, or bad faith. They were not personally liable in a civil action for damages (28 PUR NS 332).

Resistance to Public Pressure

Commissions, it has been said, are neither courts nor legislative bodies. They have been variously described as quasi-judicial, quasi-legislative, and administrative. Whatever the exact terminology may be, they have occupied a unique position in the regulatory field, weighing the rights of all who are affected by public utility operations. They have had to resist pressure from all sides, with the objective, as stated by the Utah commission, of rendering decisions to meet the measured requirements of the law without being arbitrary and without the idea of "bidding for popular approval" (PUR1925E 161).

In the words of the Illinois supreme court, the legislature in establishing the commission intended to create an office of dignity and great responsibility, and it was not expected that the commission "through fear of popular disfavor" would "coyly toy" with a situation (PUR1920C 640, 647). The commission was to "administer justice to individual and corporation, the weak, the strong, the poor, the wealthy, indifferently, fearing none and fawning on none."

The Montana commission, in denying requests by complainants against a public utility company, said that for a period of months the complainants had actively carried on through newspaper advertisements, circular letters, pamphlets, radio, and public speeches, a campaign of propaganda calculated and intended to intimidate the commission in its deliberations upon the various phases of the proceeding. The commission, not being a court, could not protect itself by holding the parties to be in contempt, but it declared that it would not be moved in its actions by any consideration of the political punishment that might be visited upon an elective officer by reason of a failure to meet the views of a great number of voters. Regulation of public utilities must not be by intimidation (PUR1932A 456).

The New York commission, in an early case, referred to an investigating committee and public dissatisfaction with rates. The commission thought that its usefulness would be materially affected and it would fall into disrepute if the feeling should spread broadcast that its determination in any particular case or in any branch of its work could be successfully influenced by a legislative committee or any of its members. The commission said it had started out with high standards when it was first created in 1907 and it had always endeavored to maintain them and confidently believed it always would (PUR1918C 675).

Disqualification for Bias

In a few cases the question of bias has been raised, but without success. A Pennsylvania court held that a commissioner was not disqualified because he was a member of the commission when it previously decided in favor of a telephone company in a case involving denial of service to a publication furnishing gambling news. Even his strenuous opposition to bookmaking did not disqualify him. Bias in the form of a firm belief in objectives of the statute the commission was required to enforce, rather than personal hostility, ac-

cording to the court, did not disqualify a commissioner (50 PUR NS 108).

The Louisiana commission rejected a recusation of a commissioner who was alleged to be prejudiced (PUR1931C 170). It was contended that through public statements in the press prior to a hearing he had prejudiced the case and could not afford a fair and impartial hearing. The proceeding, said the commission, was largely investigative and the findings of the commission, if erroneous, would be subject to judicial review. The commission was termed a legislative body, and it was said that jurisprudence seemed to be practically uniform in holding that motives of legislative bodies might not be inquired into. Their acts stand or fall upon their inherent reasonableness or unreasonableness.

In Massachusetts an objection that commissioners were disqualified to act in a railroad consolidation case, because they had previously considered and passed upon the validity of debts sought to be capitalized, was overruled (PUR1919C 650).

Criticism of Supreme Court

Whether a commissioner may properly criticize the United States Supreme Court seems never to have been decided, but by analogy it appears that commissioners may join in that popular pastime. Back in 1941, that court was called upon to review a case involving an order of the Secretary of Agriculture fixing rates to be charged by marketing agencies for services at the Kansas City stockyards. The Supreme Court had upset an earlier order because of procedural defects, and the Secretary wrote a letter to *The New York Times* criticizing the court. Interested parties demanded that he disqualify himself in subsequent proceedings because of bias. Justice Frankfurter, speaking for the court, said that he merely indulged in a practice familiar in the long history of Anglo-American litigation, whereby unsuccessful litigants give vent to their disappointment in tavern or press (40 PUR NS 439, 445).

How Many Commissioners Must Participate

The validity of commission action has sometimes been questioned on the ground that a full commission was lacking during some phase of the proceedings. According to a Texas court ruling, all members must be given notice and opportunity to be present. The commission must act as a body with a quorum present. An order signed by two commissioners at an informal meeting of which the third commissioner had no notice was declared void (47 PUR NS 98).

Orders were held to be void in a proceeding before the Indiana supreme court where they had been signed by two members of the commission in the absence of the third member. This member had had no notice or opportunity to attend a meeting relating to the matter involved. The order was held to be void even though a majority of the commissioners constituted a quorum (47 PUR NS 115).

The North Dakota supreme court declared that the commission was a pub-

lic body which could act only as a unit. While questions before it might be decided by majority vote, each member must have a reasonable opportunity to offer counsel and judgment to the other members. Action could be taken only at regular meetings or at a meeting of which each member was advised and given a reasonable opportunity to attend. A rate order signed by one commissioner who had heard the evidence and by one who had not heard it was held to be invalid. A third commissioner filed a dissent, but no action had been taken at a formal meeting (PUR1921D 662).

The question whether the Illinois commission had legally allowed a petition for rehearing was raised on appeal when six of the seven members of the commission were present, three voted to allow it, two voted not to allow it, and one refused to vote. The court ruled that the rehearing was denied because a majority of the seven members did not vote to allow it (PUR1930A 385).

An objection was raised, in a case before the Massachusetts commission, that only a full commission could act and there was a vacancy, leaving only two members available. These two commissioners overruled the objection (PUR1919C 650).

It is the established practice of commissions to assign cases for hearing by less than the full commission, or by an examiner. In accord with this practice the Colorado commission held that no error was committed when an order was signed by three commissioners though only two participated in the hearing (76 PUR NS 7).

The Missouri commission denied a rehearing requested on the ground that less than a majority of the commissioners were present at hearings and this violated a company's constitutional right to due process of law. It was contended that absent members did not have the opportunity to observe witnesses and determine their credibility. The commission said that most hearings were held by only one commissioner, and in some cases by an examiner. The practice was termed "legal and proper" (PUR1930D 444). The Missouri commission took the same position in another case, stating that the legislature did not intend to set up "an impractical organization" that would have to suspend business if one of its members were sick or unable to be present at a hearing (PUR1930E 384).

In a case before the Washington supreme court it appeared that there had been a change in the personnel of the commission during the course of hearings, but the court said that whether or not some or all of the members of the commission, as constituted at the time the record was made, would have favored the entry of a different order than the one made by the commission, the court did not know, nor was it at all material to the inquiry. The members of the commission who made the order were the lawfully constituted commission, they had before them the entire record, and it was their duty to enter such order thereon as in their opinion was proper (PUR1931E 482).

But, in a proceeding before the New Jersey supreme court, an "informal" hearing and the consideration of information outside the record were criticized. The quasi-judicial function of the commission in passing on the ques-

tion of airport licenses was noted. The court remanded the case to the commission, stating, among other things, that a commissioner who had not heard the evidence adduced in the proceeding was not eligible to participate in the determination (79 PUR NS 228).

Review of Current Cases

Utility Liable for Cost of Public Representation In Entire Rate Proceeding

THE New Jersey supreme court ruled that New Jersey Power & Light Company must pay the fee of rate counsel appointed by the attorney general to protect the public interest in a proceeding brought by the company for a rate increase.

This liability was held to extend to judicial review proceedings as well as those before the commission. The company paid the fee earned in the commission proceedings but denied liability for fees claimed in connection with judicial review of the case.

The pertinent statute simply required the utility to bear the expense of rate counsel employed by the attorney general to protect the public interest in a "proceeding" brought by the utility for a rate increase. The company urged a strict construction of the statute to limit the meaning of the word "proceeding" to the proceeding before the commission.

The court thought that the legislative policy in requiring the utility to pay the expense of rate counsel was to place ultimately upon the ratepayers the burden of defending their own interests in rate proceedings, rather than to leave it to be borne by the public treasury. The legislature evidently had in view, said the court, a rate proceeding that in its very nature was subject to judicial examination, and therefore contemplated a continuance of public representation until the end, at the expense of the utility. Consequently, the statutory "proceeding" did not come to an end until the last judicial review was had. *Alexander v. New Jersey Power & Light Co. 122 A2d 339.*

Inclusion of Tax Clause in Gas Tariff Rejected And Plant Allocations Discussed

THE Wyoming commission refused to allow a gas company to include a tax adjustment clause in its tariff schedule. Inclusion of such clauses, said the commission, is a relatively new innovation resulting from the fact that governmental units, primarily municipalities, in their search for new revenue sources have been turning recently to taxes on utilities.

The commission had not had much experience with such clauses and was not convinced of their desirability. The commission felt it should have more time to observe the effects in other states and the experiences of other regulatory bodies.

Uniform Tariffs for Communities

The company had asked that the rates be made uniform for the communities under consideration. The commission agreed

that uniform tariffs should replace the individual tariffs presently filed for each of the communities since the previously separate and distinct systems serving each municipality had now become part of an integrated system and were operated as such by the company.

Rate Base

The commission saw no reason to deviate from its use of net investment cost as a rate base standard. Such a rate base, as described in previous decisions, consisted of average investment in plant (original cost) devoted to utility service, less average depreciation reserves, plus average investment (original cost) in materials and supplies, plus an allowance for cash working capital.

That type rate base was considered fair to both the patrons of a utility and its investors. It was practical and easily understood, it was being used by other regulatory bodies not otherwise bound by statute, and it had been approved by the courts.

Allocation of Gas Plant

The commission was not entirely satisfied with the company's allocation of plant since the question of whether to allocate in full or in part, and in what percentage, was necessarily an arbitrary thing. This left the commission without any absolute formula to determine what should be included in gas plant and forced reliance on the utility's judgment. While the evidence in support of the company's allocations was not entirely convincing because of the indefinite nature of the standard of allocation, the commission was, in general, unable specifically to find the allocations improper.

However, the commission stated that it did not intend acceptance of the company's allocations to constitute approval of the present allocation formula for permanent future use. In addition to the fact that because the allocations were based on so many factors it was difficult to determine their propriety, possible future changes in the company's operations might require changes in the allocation percentages.

A working capital allowance of one-eighth of annual operating expenses was included in the rate base. Customer contributions in aid of construction, however, were excluded since the amount represented construction at no cost to the company.

Annual contributions made by the company to an employee pension fund were treated as an item of operating expense, and the portion allocable to the communities under consideration added to the amount of additional revenue after income tax which the company had been found entitled to. *Re Montana-Dakota Utilities Co. Docket No. 9302, May 2, 1956.*

Transfer of Telephone Utilities for Better Service Approved over Subscriber Protests

DESPITE strong protests from a substantial number of subscribers, the Missouri commission authorized Marion Rural Telephone Company, a newly formed corporation, to acquire three small telephone utilities, together with their operating rights. The Marion Company, having already made arrangements for financing, obtained permission to borrow $292,000 from the federal government

and to issue 1,600 shares of common stock with par value of $10 and 1,600 shares of preferred stock with par value of $40. The money would be used to purchase the properties and for construction and service improvements.

The protesting subscribers were satisfied with the existing service, owned the lines by which they were served, and paid only $1 a month for switcher service.

The three utilities reached less than half of the possible subscribers in the area, however, and new subscribers could obtain service only by building and maintaining their own lines. Other subscribers testified that the service was inadequate, and prospective subscribers declined to meet the expense of building lines.

The new company contemplated substantial improvements, including conversion to dial operation. The cost would be about $4 a month and service would be made available to everyone in the area.

Ordinarily, said the commission, the matter of cost of service is not a material element in a transfer case, but here the substantial cost differential was recognized as an integral part of the entire transaction and was considered in determining the public interest. Had the three companies provided good service to substantially all the people who wanted service in the area, the commission indicated that it would hesitate to approve a transfer if a very substantial number of subscribers did not want improved service at a higher cost. But existing service was manifestly inadequate. Considering the fact that many more people would be benefited than would be adversely affected, the commission found that the transfer was in the public interest. *Re Dinwiddie, d/b/a Philadelphia Teleph. Co. Case Nos. 13,309, 13,316, 13,317, 13,319, May 17, 1956.*

Utility Sale Price above Replacement Cost Approved In View of Proposed Improvements

THE Alabama commission approved a proposed sale by a water and gas company of its operating systems to a municipality for a price of $300,000, though reproduction cost less observed depreciation was only $290,000 and original cost less accrued depreciation amounted to $230,000. No witnesses were produced in opposition to the sale.

Before giving its approval to the transfer, the commission was required by statute to determine whether it would be consistent with the public interest. A reasonable price would, of course, be of prime importance in the determination. Whenever the agreed price exceeds the cost of replacing the property, said the commission, extreme care and judgment must be exercised before approving the sale.

Except for one compelling consideration in this case, the commission would have disapproved the sale as being opposed to the public interest. This consideration was the purpose of the purchasing municipality to provide substantial improvements to the water system without requiring any increase in rates, whereas, if the sale were disapproved and private operation continued, the needed improvements could not reasonably be financed without higher rates. In view of this important factor, the commission was of the opinion that the public interest would be served by the proposed sale at the agreed price. *Re Alabama Water & Gas Co. Docket 14118, May 8, 1956.*

Transit Reorganization Plan Approved Subject to Conditions

THE New York commission approved, as modified, an amended reorganization plan for the Third Avenue Transit System, located in New York city.

There was one provision of the underwriting agreement which occasioned concern. That provision permitted the underwriter to withdraw if the commission did not approve the issuance of the securities provided for in the plan within sixty days after entry of the court's order confirming the plan. Depending upon the date upon which the court acts, said the commission, it might be impossible to authorize the issuance of securities proposed within sixty days unless the commission was willing to permit the issuance of securities which would result in a corporate deficit.

The commission had previously indicated it would not authorize securities under such conditions. Any approval by the commission of the issuance of the securities would of necessity be conditioned upon the plan not becoming effective until such time as earnings were sufficient to make book assets exceed book liabilities, including the stated value of the securities to be issued under the plan.

The reorganization plan was approved, as being in the public interest, subject to the following conditions:

1. That the opening entries of the reorganized corporations comply with the Omnibus Uniform System of Accounts and reflect the transfer to surplus of the excess in the depreciation reserve, and as to one of the reorganized corporations, the transfer of such portion of the premium on the new capital stock as might be necessary to make surplus zero upon emergence from reorganization.

2. That the plan would not become effective unless and until the consolidated book assets of the reorganized companies equaled or exceeded the consolidated book liabilities, including the stated value of the securities to be issued under the plan. *Re Doyle, Trustee, Case 17399, April 2, 1956.*

Community Television System Certificate Awarded to One Of Mutually Exclusive Applicants

HAVING noted a previous decision that public convenience and necessity required the construction and operation of community antenna television systems in isolated communities unable to receive television reception from distant stations, the Wyoming commission was confronted with two mutually exclusive applications for the same community.

The economic fertility of the municipalities involved was too thin to support both. The commission was convinced that it would be contrary to the public interest to allow both applicants to compete for the potential market.

The task of deciding which applicant should be awarded the certificate was made more difficult after the commission concluded that both would produce an acceptable commercial television picture of comparable quality, and that both were fit, willing, and able.

The expediency of installation and the ultimate cost to subscribers became the criterion. The commission held the successful applicant to be more reliable from

an operating standpoint and to possess greater flexibility. Both estimated cost of construction and operating expenses would be less.

Customer Contributions

The commission reiterated a previous stand that prospective users of cable television service who are willing to contribute a reasonable amount toward construction in order to receive the benefits should not be prohibited from doing so. The Public Utilities Act did not prohibit such financing.

The regulatory powers of the commission over such contributions should be directed toward their use rather than the amount. The commission should establish safeguards which would insure the intended use, and prescribe accounting rules to be followed and indicate the treatment to be given in determining a just and reasonable rate structure.

The successful applicant was authorized to collect contributions in aid of construction from subscribers. Until the system was fully completed, it could not be determined with certainty whether the cost would be more or less than the total amount of subscriber contributions. If contributions amounted to more than the cost of the system, the commission directed that the surplus should not be treated as income, but should be refunded pro rata to subscribers.

The commission did not deem it prudent to resolve rate issues in the instant proceeding, since it could not be determined with reasonable certainty whether the proposed tariff rates would be just and reasonable until the company had acquired some operating experience and determined what investment, if any, it would have in the system when completed. *Re Carollo, Docket Nos. 9295, 9300, May 1, 1956.*

Question of "Bona Fide Operation" for Commission Determination

THE question whether a bus company was "in bona fide operation" under its certificate, within the language of a "grandfather" statute, was held by the Kentucky court of appeals to be an issue of fact for the commission to determine. The company's certificate authorized it to operate in a suburban territory, over a particular route, a distance of 4 miles. Apparently, through the years, it undertook to serve additional routes of approximately 10 miles in that territory. In "clarifying" the existing certificate, the commission decided that the company was operating bona fide over the additional routes in conformance with its certificate and was entitled to "grandfather" authority.

The commission based its decision upon findings that for fifteen years, without objection, the company had operated over the routes specified in its certificate, as well as additional routes. Aware of these operations, the commission annually renewed the company's certificate. Although the court indicated that it respected the commission's finding that the company's certificate was ambiguous and therefore entitled to be clarified, it was of the opinion that the real question was whether the bus operations over the questioned routes were bona fide under the statute.

It was contended by opposing parties that the company had operated in violation of state law and therefore did not operate bona fide under the statute. The

court conceded that the statutory expression "in bona fide operation" plainly would not extend to a carrier operating in violation of the laws. But the "grandfather" rights were not conditioned on compliance with the laws. Their violation, it was pointed out, is material only in so far as it may be relevant to establishing an absence of "bona fide operation." Infractions of state law may be innocent or wilful, minor or considerable. Since there was substantial evidence to support the commission's finding that the bus operations were bona fide, a lower court judgment overruling the commission was reversed. *Buechel Bus Co. et al. v. Whitaker et al., d/b/a Blue Motor Coach Lines, 288 SW2d 60.*

Company Allowed to Recoup Abandonment Loss

THE Pennsylvania commission, in passing upon a complaint that a water company's rates were unjust and unreasonable, accepted the company's theory that it should be allowed to recover losses incurred as the result of abandoning a source of supply. Contamination was beyond the company's control, said the commission, and there was no evidence that management had been derelict in performing its duties. The company was allowed to recoup, by amortization, the actual cost of the property to its stockholders. The rates, which would produce a return of 5.42 per cent on an original cost rate base, were not considered excessive by the commission.

Cash Working Capital

The company's estimate of cash working capital was based upon one and one-half months' operating expenses, exclusive of water purchased, depreciation, and income taxes, less accrued taxes. In its claim, the company had given no consideration to the lag in payment of expenses, nor had it excluded certain accrual items of operating expenses. Recomputing cash working capital, the commission disallowed the claim in its entirety.

Management and Supervision Services

The company received management and supervision services from a service company. The total cost to the service company had been allocated to the operating water utility on the basis of the number of consumers served by each operating company. The commission held that the actual costs incurred by the service company were properly allocable to the operating company and acceptable for ratemaking purposes.

Collection Expenditures

The company had expended sums during the test year collecting delinquent accounts, but proposed to eliminate the amount from anticipated operating expenses since it classified them as nonrecurring. Such expense is incurred in the normal operation of business, said the commission, and an allowance therefore should be based upon average experienced costs over a period of years. In the absence of such an average, the commission allowed one-third of the actual costs for the one year.

Casualty Losses

A flood had washed out the company's transmission line, necessitating expenditures which had been included in anticipated operating expenses. An expense of this nature, held the commission, could not be considered normal and was prop-

erly amortized over a period of years.

The company's estimate of annual depreciation had been based on the amount taken for tax purposes. Such a claim was held inconsistent with the 4 per cent compound interest method used by the company in determining accrued depreciation. *Howes et al. v. Mather Water Co. Complaint Docket No. 16442, April 30, 1956.*

Fair Value Determination Draws Dissent As to "Disallowances" and Weight Given Book Cost

SHOWING substantial additions to plant, besides high operating costs, Durham Telephone Company obtained a rate increase from the North Carolina commission, though rather less than the amount requested. The commission established a fair value rate base of $5,200,000 upon which it allowed a rate of return of 5.81 per cent. Present value, reproduction cost, and original cost were considered in the fair value determination, as required by North Carolina law.

Property Valuations Submitted

One company witness submitted a reproduction cost new valuation of $7,435,-714 based on an inventory and appraisal. Observed depreciation of 12 per cent was applied to this sum reducing it to $6,484,-504 as appraised value. To these figures were added general overheads, interest during construction, plus omissions from appraisal. Other items added were plant under construction, materials and supplies, cash working capital, and an amount for "going value" based upon 10 per cent of the total direct construction cost. The witness thus arrived at a total value of $9,614,036 as reproduction cost new, and $8,536,222 after observed depreciation.

Another company witness testified that a fair value of the company's properties was $8,497,500. This amount was determined by multiplying the number of telephones in service by a valuation of $250 each, the latter figure being the average valuation of the telephones of nine other telephone companies. A third witness submitted considerably higher valuations, also including overheads and going value. Total gross investment per books was shown at $6,978,669.77, which included a plant write-up item called "undistributed cost of property" in the amount of approximately $424,000. An additional write-up of $100,000 was purportedly included.

A protesting witness testified that the average net investment, including working capital, was $4,586,266, which excluded the write-up amount of $424,000. According to the commission's accounting staff, the average net investment plus an allowance for working capital was $4,533,684.65. This investment base took into account the income tax accruals available to the company under the accelerated depreciation provisions of the Internal Revenue Code of 1954, use of which was reflected on the company's books at the staff's examination.

Consideration of the Valuations

After considering present value, reproduction cost, and original cost, the commission is required to make an independent determination, without reference to any specific formula, as to what constitutes a fair value of property used for public service and what constitutes a just and reasonable rate of return. In arriving at fair value, the commission will consider

only those elements of investment which earn the return.

By inference, the two write-up items were disapproved. Also inferentially rejected were entries of about $7,000 for franchise expenses and $3,000 representing excess of purchase price over stated plant value of a telephone exchange acquired by the company. The commission noted that an observed depreciation of 12 per cent had been applied in arriving at the appraised valuations, whereas the book reserve bore a relationship to book depreciable plant of approximately 26 per cent. The commission observed that annual depreciation deductions should be based upon book cost and not upon fair value or reproduction cost.

It was noted that such items as general overheads, interest during construction, omissions from appraisal, and going value, which were included in the company's reproduction cost and appraised value rate bases, were not incurred as elements or costs in the construction of the properties. To give the proper weight to reproduction cost new or to appraised value, said the commission, consideration should be given to net direct construction cost properly depreciated, plus plant under construction and appropriate working capital. The fair value estimate based on the valuation of other companies' telephones was held to be deficient in that there was no showing of the cost conditions under which they operated. Without such a showing, no proper comparison could be made.

Revenues and Expenses

Differences between the company's calculations of net operating income and the computations of the commission's staff issued chiefly from the fact that the company assumed a going level basis during the test period whereas the staff worked from actual operations. The differences also derived from diverse treatment of tax liability as affected by accelerated depreciation. The staff computation made no allowance for an item of $80,000 representing 1951 rate case expenses, a major portion of which had already been paid. The company claimed $16,000 as the amortized part for one year, but the commission impliedly disapproved the item.

Attention was called to the company's losses resulting from directory advertising. The company had allowed an affiliate to handle its directory advertising, whereas independent directory advertising agencies in the state had been returning profits to the companies they served. Inferentially, the commission disapproved this operation, noting that the 5.81 per cent rate of return which it allowed could be increased to 6 per cent if the company would place its directory advertising with an independent agency.

Dissenting Views

Commissioner McMahan said the majority's fair value determination of $5,200,000 gave little consideration to the reproduction cost new of $7,435,714 and the appraised value of $6,484,504. There being no evidence to contradict these figures, it appeared to this commissioner that the majority had given greater weight to book cost, or to particular items which it disallowed, than to what the evidence showed the value to be.

It was noted that no consideration was given to any allowance for cash working capital or materials and supplies on the ground that federal income tax accruals would be adequate to cover those needs. Commissioner McMahan observed that the Internal Revenue Code now requires that corporations whose income tax liabilities exceed $100,000 (as does Durham Telephone Company) shall pay an

increasing percentage of their taxes in the year in which they accrue, so that by 1959 such corporations will pay 50 per cent of their taxes currently. He thought, therefore, that cash working capital should be allowed, and "by all means materials and supplies, which constitute a part of the company's property just as much as do buildings and ground." He said the valuation should have been fixed between $5,750,000 and $6,000,000.

The commissioner was of the opinion that any efficient public utility rendering good service has a right to earn a rate of return "such as is generally earned by other highly competitive and nonspeculative businesses." He considered as unfair anything below 6 per cent on a fair value rate base. In this case, it was said, the company would not be able to earn the 5.81 per cent purportedly allowed since the commission had eliminated a number of expenses without even finding that they were improper. Such expenses must be met from the 5.81 per cent return. If expenses are to be disallowed as improper, said the commissioner, there should be a clear and distinct finding of their impropriety, based upon competent evidence.

The commissioner strongly objected to the majority's "direct advance further into the field of management" by its treatment of the directory advertising matter. The majority opinion intimated that it would not allow a 6 per cent return because the company had not earned an additional $10,000 a year by selling advertising space in its directory. Commissioner McMahan said that income from advertising in a directory has nothing to do with income derived from telephone service. It is wholly within the prerogative of management. The stifling of management, he warned, will not produce low rates, for the public interest is best served by free and private enterprise. *Re Durham Teleph. Co. Docket No. P-19, Sub 19, May 28, 1956.*

Emergency Surcharge Established by Letters And without Hearing

THE Oregon supreme court ruled that a surcharge applied by Pacific Power & Light Company was valid, though it was requested and authorized by letter and without a hearing. In so ruling, the court upheld the trial court which dismissed an action by consumers to recover surcharge payments on the ground that there was no valid, filed tariff authorizing the surcharge. The additional charge was authorized to cover the high cost of steam generation incurred during periods of inadequate water power resulting from lack of rain.

Under the Oregon statutes consumers who believe they have been charged in excess of legally filed rates may sue to recover the overcharge. Any questions of reasonableness of rates or discrimination, however, must be addressed in the first instance to the commission since they are matters within the administrative power. The only question in this case was one of law; namely, whether there was a legally filed tariff to support the surcharge.

The consumers contended that neither tariffs nor orders may be filed or issued in letter form. The court observed that the purpose of filing rates is to place before the public "the facts necessary to enable the customer to determine how much money he is required to pay for a given service." The form in which rates shall be filed is not prescribed by Oregon

law. The letters, which were said to be invalid as a tariff, set forth exactly the amount of the surcharge and were duly filed by the commission. The court was therefore of the opinion that the letters fulfilled the requirements of a valid schedule and order.

Ordinarily the commission must afford a hearing before authorizing rates. The surcharge attacked in this case, however, was an emergency measure. The statute pertaining to emergency rates does not require a hearing, and the court did not think that the legislature intended to restrict the commission's emergency powers. It is to be noted that this case was not an appeal from the commission's order declaring an emergency and establishing emergency rates, so that no question as to the necessity of a hearing to determine an emergency was put in issue. The question of a hearing was raised only in regard to the surcharge itself. *McPherson v. Pacific Power & Light Co. 296 P2d 932.*

Telephone Rate Increase Approved after Adjustments To Expenses and Working Capital

THE Minnesota commission granted a rate increase for a telephone company upon a showing that rates then in force produced a rate of return of only 4.26 per cent. The new rates, which were approved as proposed, were calculated to provide a fair rate of return of 5.97 per cent.

Several items in the proposed income statement and rate base were adjusted. An item described as "amortization of debt expense" was disallowed. Depreciation expense was appreciably increased over the amount claimed, in order to make the company's depreciation rates uniform with those allowed for other members of the holding company system in which this company operated. Consequently, of course, *pro forma* income taxes were appropriately reduced.

The company requested a working capital allowance equal to one month's operating expenses, excluding depreciation. The requested amount was reduced by further exclusions of amortization, operating taxes, and income taxes. *Re McLeod County Teleph. Co. M-3913, May 28, 1956.*

FCC Discretion to Change Views

THE United States court of appeals affirmed an order of the Federal Communications Commission which awarded a permit to construct a television station to one of several applicants. The commission had found that the successful applicant proposed a greater quantity of localized programming and was strikingly superior in content and assurance of effectuation. The award had been made notwithstanding local ownership of the rejected applicant and absentee ownership of the successful applicant.

The court held the controversy to be within an area in which it seldom felt justified in intruding. The commission's view of what is best in the public interest, said the court, may change from time to time. The present proceeding suggested that the commission had changed, or was changing, its view as to the dominant importance of local ownership and as to the

evil of concentration of a media of mass information. In so doing it was operating within the area of legislative-executive judgment.

The court would not interfere with such discretion as long as the process, premises, and the judgment were not arbitrary. The record indicated that the commission had considered every suggested index of differences between the applicants. The function of the court was to assure itself that the commission's conclusion had ample support by the evidence, but not to evaluate the evidence. *Pinellas Broadcasting Co. v. Federal Communications Commission, 230 F2d 204.*

Court Reverses Portion of Penalty Deemed Cumulative

THE Pennsylvania superior court reversed part of the penalties the commission had assessed against the York Telephone & Telegraph Company (10 PUR3d 209), citing the cumulative aspects of the additional fines as the reason.

Prior to the imposition of the penalties and the appeal to the court, the commission had ordered the company to render improved service and engage additional man power for that purpose. Subsequently, the commission had found, and the court agreed, that the company had deliberately chosen to refrain from expenditures for man power which would have provided timely service, contrary to the administrative agency's mandate. The company deserved to be penalized, held the court, and could not object that the imposition of the fines would weaken its financial structure, since it had ample resources. The initial penalty for failure to install additional cable crews was upheld by the court.

The commission, in addition, had imposed penalties for "persistent and unjustified failure" to provide service to certain applicants. The court was convinced that the additional penalties were improperly imposed.

From the evidence it was apparent that the company's failure to supply the services was due in whole or in part, in each instance, to neglect to provide the additional cable crews. In that respect, held the court, the commission order directing an additional penalty was a duplication of, and in cumulation of, the cable crew penalties already imposed. The two violations of the commission's order, in reality, were but different phases of the same delinquency.

The authority to impose penalties must be strictly construed, held the court. Cumulative penalties not expressly authorized by statute could not be imposed.

Elimination of Discriminatory Rate Practice

The company had been providing multiparty service within base rate areas at the same rate charged for 4-party line service. The commission had found that the practice was discriminatory and had required its elimination within a reasonable time. The court found no fault with such a directive.

Cut-off Devices

Cut-off devices were employed by the company to terminate calls in local service areas after five or six minutes. The purpose was to avoid additional capital expenditures. The commission had ordered the company to eliminate the use of time cut-off devices within a reasonable time.

The employment of a cut-off device, in

the first instance, and the continuance of its use under varying conditions and circumstances, commented the court, may be a matter within managerial discretion. Unrestricted service should be the objective, however, and the court saw no good reason for indefinite continuance of the practice. The company had the capital or credit necessary to finance the change and essential man power and construction materials were available. The commission could reasonably question the quality of service rendered as affected by the operation of the cut-off device. *York Teleph. & Teleg. Co. v. Pennsylvania Pub. Utility Commission, 121 A2d 605.*

Other Recent Rulings

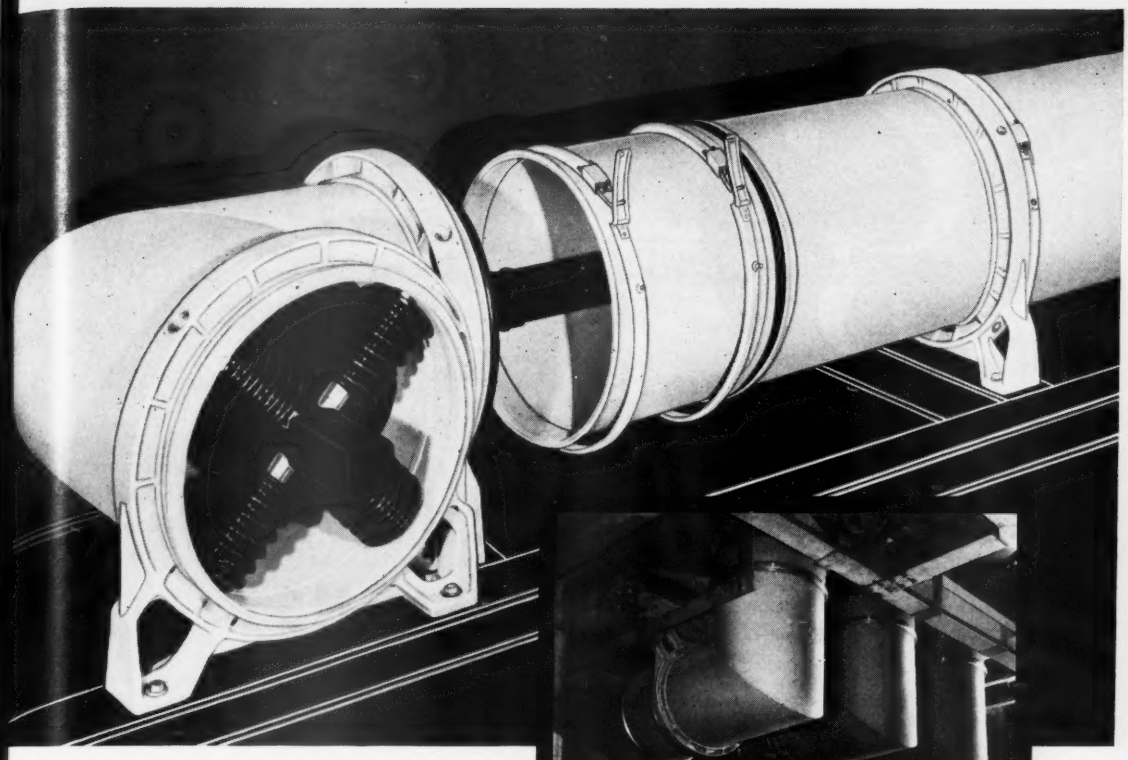
Revocation Review. The New Mexico supreme court, in reviewing a commission order revoking a motor carrier certificate, ruled that nonuser, without more, does not constitute either abandonment or discontinuance of service where the certificate holder is at all times fully equipped, ready, able, and willing to operate. *Musslewhite v. New Mexico State Corp. Commission, 295 P2d 216.*

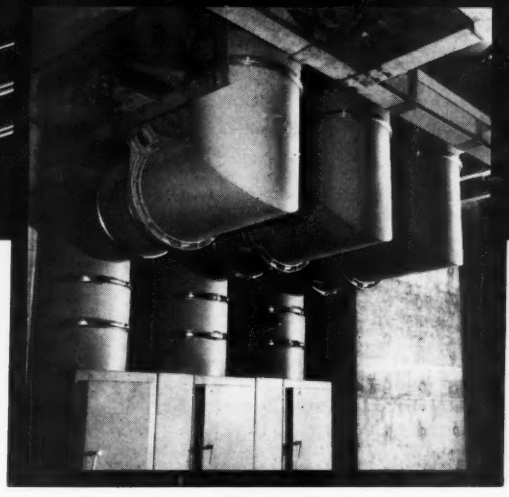
Telephone Service Deficiencies. A telephone company was ordered by the Ohio commission to correct service deficiencies by eliminating unreasonable connection delays between certain exchanges, providing necessary maintenance of switchboard facilities, correcting defective service occurring in bad weather, and improving the method of keeping trouble records so as to conform with commission standards. *Subscribers v. United Teleph. Co. No. 25,597, February 10, 1956.*

Prospective Rate Base. Two California water utilities operated in adjoining territories by a single owner were granted an integrated rate increase calculated to afford a rate of return of 6.5 per cent on a prospective, depreciated rate base which included reasonable plant additions proposed to be made in the immediate future, the increase being expressly predicated, however, upon satisfactory service. *Re Sciarra (Del Rio Water Co. and Camp Rose Water Co.) Decision No. 52903, Application No. 37103, April 17, 1956.*

Rail Freight Rates Increased. The Wisconsin commission granted freight rate increases to intrastate railroads not exceeding a 6 per cent increase authorized by the Interstate Commerce Commission for interstate traffic, in order to enable the carriers to meet increased operating costs, where the increase would permit them to earn an average rate of return of probably 3.03 per cent. *Re Tariff of Increased Rates and Charges X-196, 2-R-3039, April 26, 1956.*

Motor Carrier Zone. Under an Ohio statute authorizing the commission to define a commercial zone surrounding a municipality and permit motor common carriers serving the municipality to extend their operations into the commercial zone, the state supreme court held that in acting upon this statutory authority the commission need not make a finding of public convenience and necessity as to such extended carrier service since the finding would be implicit in the commission's action. *Beiter Line, Inc. et al. v. Ohio Pub. Utilities Commission, 133 NE2d 135.*





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riginal or similar...which do you prefer?

"Imitation is the most sincere form of flattery!" When Delta-Star introduced the new isolated phase bus with telescoping covers, its time-and-money-saving value was immediately recognized by utility engineers and by the fact that similar buses were soon introduced in the market.

Delta-Star's original telescoping-cover bus is quick, easy, and economical to install. Covers are an integral part of the enclosure—no bolts needed, no covers to lift, and no longitudinal gaskets to install.

Quick access reduces bus inspection and maintenance time. Easily operated clamping rings lock and seal enclosure against dust and moisture.

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Industrial Progress

Wisconsin Electric Plans $300,000,000 Expansion of Facilities

ISCONSIN Electric Power Com-y recently announced a 10-year, ee hundred million expansion pro-m that would increase its power erating capacity to more than two llion kilowatts when completed. This would be double the company's sent capacity. G. W. Van Derzee, irman, said the program includes tallation of two more generating ts at the company's Oak Creek nt south of Milwaukee. Each unit, ch will cost approximately thirty- million, will have a capacity of ,000 kilowatts.

Two more generating units of the e size will be added to the Oak ek facilities later, Mr. Van Derzee . An order for the first of these r units has been placed with the is-Chalmers Manufacturing Com-y. It is scheduled to be ready operation by 1960.

Mr. Van Derzee said the company ects a large industrial development southeastern Wisconsin. The com-y and its subsidiary, Wisconsin-chigan Power Co., serve an area m Illinois state line to Lake perior.

gh Power Mobile Radiophone Announced by Motorola

MOBILE two-way radio rated at watts transmitter power output any channel in the 25-54 mega-le frequency band has been an-nced by Motorola. The unit is the st addition to the company's line Twin-V radiophones. It incor-ates a new highly efficient dyna-tor-vibrator power supply which, power intake equivalent to con-tional 60 watt mobile radios, pro-s full rated transmitter output. The transmitter is capable of up to 4-channel operation with each frequency crystal-controlled. Motorola's Sensicon receiver, the transmitter and power supply are contained in a compact steel case approximately 6 x 15 x 20 inches. The speaker, control head and microphone are designed for convenient dash-mounting. The radio set operates interchangeably between 6 and 12 volt vehicles without adapters or modifications. Models are available for both standard and "split" channel operation.

More information is available from Motorola Communications and Electronics Inc., 4501 W. Augusta blvd., Chicago 51, Ill.

A-C Announces New Autotransformer

A NEW lightweight, economical autotransformer has been announced by Allis-Chalmers Manufacturing Company for boosting or bucking secondary voltages. This unit, which is produced at the firm's Pittsburgh Works, offers convenient voltage control to utilities who economize by using no-tap transformers on their distribution systems.

The new autotransformer is also suitable for adjusting the voltage ratio of distribution transformers from one voltage to another.

Molded in epoxy resin and fitted with electro tinplated clamp connectors, the autotransformer is small, compact, relatively light, and can be easily mounted in several positions on poles, crossarms or buildings. It is tough enough to withstand severe operating and weather conditions.

Georgia Power Adding New Unit to Plant McManus

A 75,000-KILOWATT electric generating unit will be added to Plant McManus, the Georgia Power Company's steam plant near Brunswick, it was announced recently by Harllee Branch, Jr., president. The new generating unit will cost more than $13 million and will virtually treble the capacity of the existing plant.

Construction work on the new addition will begin early in 1957 and the unit is scheduled to go in service by the middle of 1959. A contract for the turbo-generator has been awarded to Allis-Chalmers Manufacturing Co. and an order for the boiler has been placed with Babcock & Wilcox Co.

Plant McManus is named for C. B. McManus, president of The Southern Company and a former president of the Georgia Power Company.

The new generating unit will supplement present facilities of the company, consisting of 21 hydroelectric and 8 steam-electric plants. Plant Yates, located on the Chattahoochee river, near Newnan, which has a present capacity of 300,000 kilowatts, is now being enlarged through the addition of two 125,000-kilowatt units to be completed in 1957 and 1958. The company has also applied to the Federal Power Commission for a license to construct a 60,000-kilowatt hydroelectric plant on the Chattahoochee river, near Columbus.

Kuhlman Introduces New "Quick-Grip" High Voltage Bushing

A NEW high voltage bushing for distribution transformers rated above 5 KV is now offered by the Kuhlman Electric Company of Bay City, Michigan.

The new bushing features a hard rubber hand-grip insulated connector for protection against service interruptions caused by birds and/or animals coming in contact with live parts. Based on the principal of Kuhlman's original "Quick-Grip" design for voltages below 5 KV, the hand-grip connector, also, allows quick easy line installation. Secure high voltage con-

nections are made by simply turning the hand grip. No tools are necessary.

Ebasco Services Announces Personnel Changes

EBASCO Services Incorporated has announced that Charles C. Bonin has been appointed engineering manager of the company and that H. K. Fairbanks has been named chief concrete-hydraulic engineer and G. F. Latham, chief architectural-structural engineer.

Mr. Bonin joined Ebasco as a civil engineer in 1938. He participated in many utility system power supply studies, was a member of the staff operating the Northwest Power Pool, and was job civil engineer on the design of many steam electric generating stations. He was also project hydraulic engineer on a number of projects in the Northwest. From 1950 to 1954, he was manager of the Overseas Consultants Inc. office in Japan. In 1955 he was appointed Ebasco's chief civil engineer in New York and as such was in charge of all hydraulic, substructure, architectural and structural design.

Mr. Fairbanks joined Ebasco in 1940 as civil engineer in the concrete—hydraulic engineering section. In that capacity he handled many important projects and was appointed supervisor of the concrete-hydraulic engineers in 1954.

Mr. Latham joined Ebasco in 1923 in the Design Department. In 1942 he joined the Civil Engineering Department and was made supervisor of structural engineers in 1954.

Design Improvements in Metal-Clad Switchgear Listed In New G-E Bulletin

RECENT design improvements in General Electric metal-clad switchgear with magne-blast circuit breakers are described in a new publication now available from the General Electric Company, Schenectady 5, N. Y. The publication is designated GER-1194.

Some of the improvements cited in the publication include a Polyester glass flame retardent Self-X insulation which reduces fire hazard; Butyl molded, through-type current transformers, which are interchange from 200 to 4,000 amperes, and a drawout carriage of dry type co power transformers and prim fuses which allows easier mai nance.

Circuit breaker improvements also described in the bulletin.

Medium voltage, metal-clad sw gear is now available with interr ing ability up to 750 MVA.

R-R Introduces New Porta Photocopier

A PORTABLE Photocopier, signed to copy pages of bound b just as easily as flat material, wa cently introduced by Remin Rand. Weighing only 13 pounds plete with cover, the sturdy, all-m unit is finished in Gray-Rite. Si to operate, it produces full-size co of any record—typed, printed handwritten, on paper, cloth, film even heavy card stock. It is econ ically priced and will photocopy b rect light transmission or by refle light.

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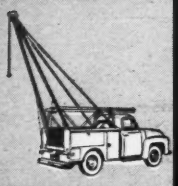

SERIES 350 Bodies have an under-floor winch, a fold-ove derrick, and an extension ladd Compartments are equipped carry a variety of service tool parts, and materials.

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SERIES 450 Bodies, designe for light duty construction an maintenance work, are equipp with a revolving aerial ladder, an underfloor winch, and an easy-to-use derrick.

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New $10,000,000 PG&E Ga Line Project Started

WORK was begun recently on a $1 000,000 addition to Pacific Gas a Electric Company's "Super Inch" main to increase out-of-state suppl according to Norman R. Sutherla PG&E president and general m ager.

The general pipeline contract been awarded to the joint venture f of Midwestern-Johnson-Dixon. calls for the installation of three s tions of 34-inch steel pipe for a t of 85 miles. These will parallel p tions of the 502-mile main which tends from the California-Ariz border near Topock to the Milp metering station at the southern e of San Francisco Bay. The work be completed late this year.

The normal capacity of the big li which delivers gas from Texas New Mexico wells, will be increa from 700 million cubic feet daily 750 million c.f.

Under other contracts which part of the project, 6,620 horsepo of additional compressor capacity be installed, bringing the total on Super Inch to 74,480 hp.

A second pipeline bridge will built across the Colorado river at pock to carry a new line to be c nected to the El Paso Natural Company system. This contract be awarded later.

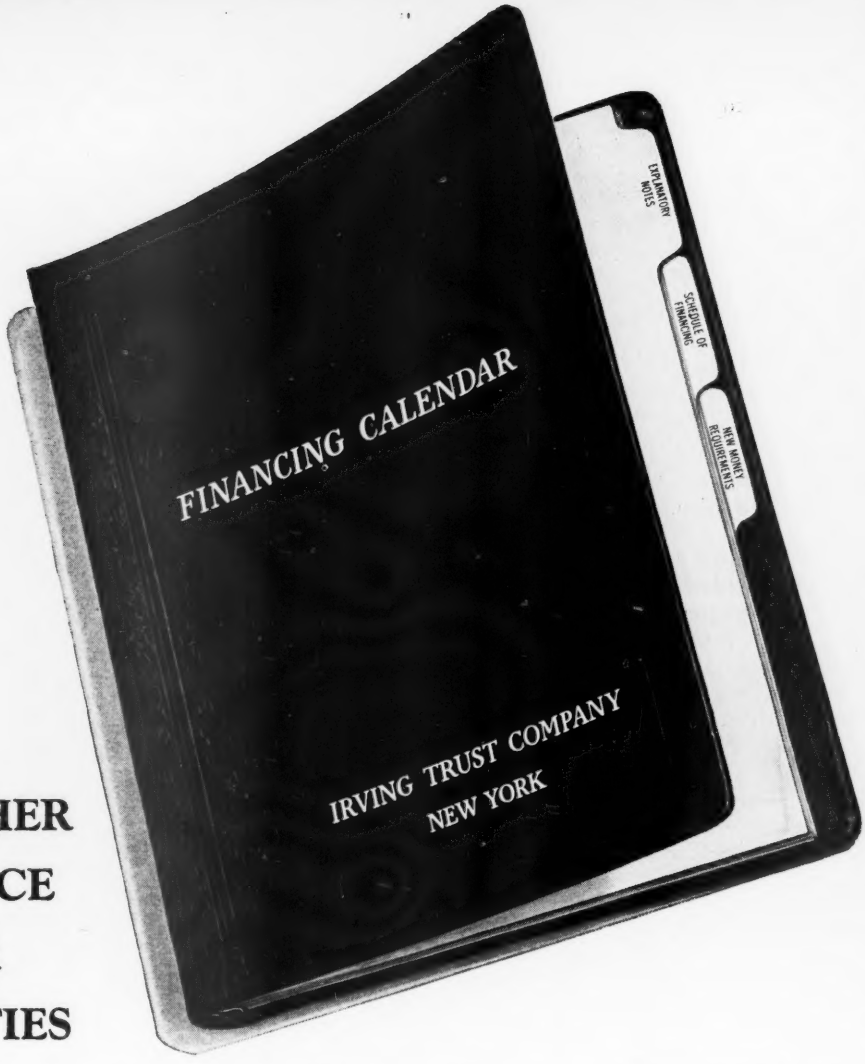
The project about to be started, Sutherland said, will increase PG& investment in this line to about $12 000,000.

Philco to Construct Microwa System for Southeastern Te

PHILCO'S Government & Ind trial Division recently announced it has been awarded a contract by Southeastern Telephone Company construct a microwave commun tions system between Tallahas Florida, and the town of Montic about 25 miles distant.

The new system, to supply ad tional telephone trunk circuits tween the two towns, will use Phil CLR-7 microwave equipment ope ing in the 6,000 megacycle ra Emergency standby power equip is included in the contract.

A 180-foot microwave tower



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be constructed at the Southeastern Telephone Company's central office in Tallahassee to provide a line-of-sight path to a 200-foot tower adjacent to the new Monticello telephone exchange. The antenna systems will use eight-by-twelve-foot reflectors and eight-foot paraboloidal antennas.

Philco microwave communications systems currently are being used, not only by leading common carriers, but by pipe line companies, turnpike authorities, railroad and power utility companies. The new microwave system being constructed between Tallahassee and Monticello is the third such system to be constructed for the Southeastern Telephone Company by Philco's G. & I. Division.

Four Wheel Drive Names New Utility Market Sales Manager

JOHN M. CASEY has been named utility market sales manager for Four Wheel Drive Auto Company, it was announced by G. F. DeCoursin, vice president-sales for the Clintonville (Wis.) manufacturer of custom-engineered four and six-wheel-drive heavy-duty trucks.

Mr. Casey, who has more than 13 years service with FWD, succeeds T. G. Shedore, who is retiring after 39 years with the company.

BLH Expands Eddystone Hydraulic Laboratory

TO accelerate its research development program in the field of hydraulic turbines and pumps, Baldwin-Lima-Hamilton Corp. recently completed an extension to its Eddystone, Pa. hydraulic laboratory. The addition includes equipment which, for the first time, makes it possible to test runner models both as a turbine and pump under a complete range of operating conditions without changing the hydraulic set-up.

The expanded facilities extend the range of propeller runner research as well as that for the reversible pump-turbine, a design now showing promise of meeting certain applications on large utility systems. The tremendous expansion of these systems, with larger steam turbine generators constantly being installed, together with entry of nuclear power plants into field, introduces the problem of maintaining a high load factor on units.

The announcement states that reversible hydraulic pump-turbine offers the best solution because uses reasonably low-cost, off-power to pump water into a reservoir to serve as a complementary storage and power-supply medium. The pump-turbine then operates as a turbine generator to supply power during system peaks, and the large steam units and nuclear plants carry the load and operate at full capacity around the clock.

Cleveland Elec. Illuminating Installs Microwave Controlled Protective Relaying

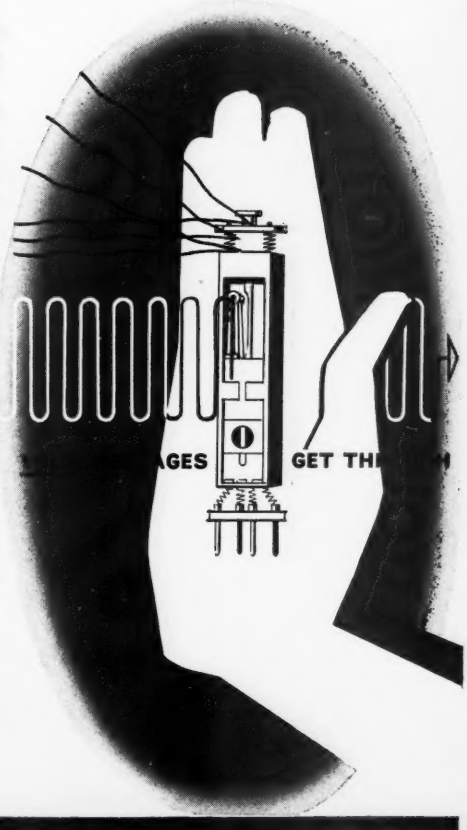
CLEVELAND Electric Illuminating Company recently announced the installation of a Motorola microwave link between two of its substations to provide protective relaying, as well as telemetering and voice communications. According to the manufacturer

Triumph over Channel Chatter

with PRIVATE-LINE 2-Way Radio

VES YOU GREATER RANGE, MAXIMUM PROTECTION AINST NUISANCE AND SKIP INTERFERENCE

a new dimension in two-way radio communications—the result of of extensive engineering and "on-the-job" field testing. PRIVATE-E radiophone incorporates an entirely new circuitry concept which ides privacy from interfering signals and unwanted co-channel mes-. Now you can "get off the party line." No longer is it necessary sten to a constant stream of "channel chatter" over the loudspeaker. VATE-LINE radiophone is *completely quiet* except when receiving a from another PRIVATE-LINE radiophone in the same operation.



EDUCES MISSED AND MISUNDER-TOOD MESSAGES—operators hear nly messages within their own peration—minimizes confusion, in-tention.

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- **EASIER TO OPERATE**—no additional buttons, lights, adjustments or operational techniques—elimination of squelch adjustments makes PRIVATE-LINE even simpler to operate than conventional two-way radio equipment.
- **REDUCES OPERATOR FATIGUE**—elimination of "channel chatter" enables operator to concentrate on his job—reduces tension, providing a more pleasant atmosphere—increases job satisfaction.

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this is the first installation to use Motorola microwave, multiplexing, and wide-band carrier for the transfer of trip signals from one substation to another. The new installation permits Cleveland Electric Illuminating Company to save the capital equipment and installation costs of a 132 KV circuit breaker.

The Cleveland Electric Illuminating Company's protective relaying system is designed to provide protection for both the transmission line between the two substations and a 100,000 KVA, 66-132 KV auto transformer. Line protection is provided for phase-to-phase and ground faults; transformer protection is provided for over-current, loss of oil pressure and internal ground. Impedance and ground relays control the trip signals sent over the wide-band carrier and microwave.

The installation of this microwave link was the culmination of several years of planning and testing. As early as May of 1954 protective relaying channels over Motorola equipment were installed for an extensive test program. According to Cleveland Electric Illuminating Company, the test showed 99.984% reliability and 100% security. The time for the transfer of the trip signals was 10 milliseconds.

With the installation of this microwave link, Cleveland Electric Illuminating Company announced plans to complete several other Motorola microwave-controlled protective relaying systems within the coming year.

Stationary Battery Service Life Extension Described in New Exide Catalog

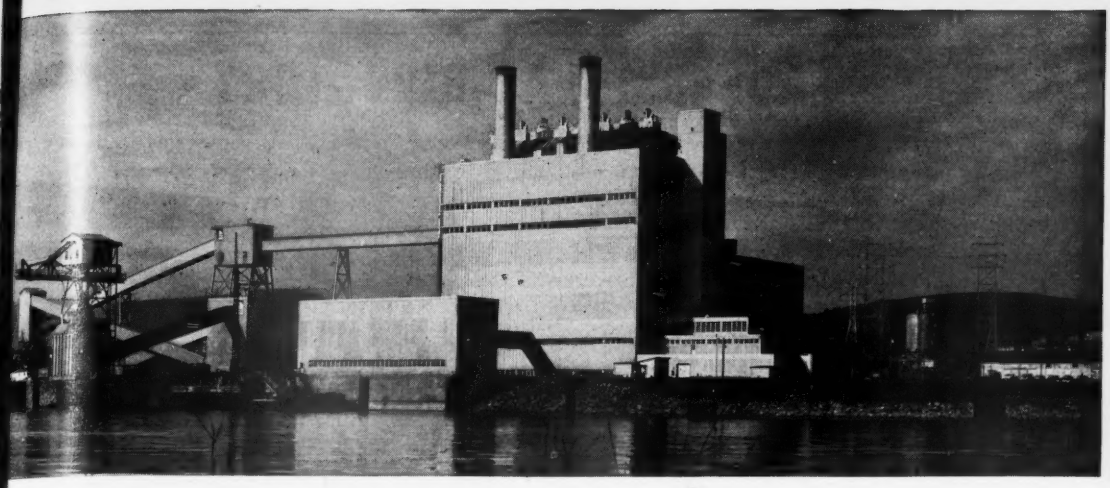
IMPROVEMENTS in stationary batteries which are expected to extend service life up to ten per cent and reduce maintenance requirements are described in a new catalog published by Exide Industrial Division of The Electric Storage Battery Company, Philadelphia.

Devoted to Exide-Tytex flat-plate batteries which are intended for uses in the electric utility field, for si ing, telephone service, emerg lighting and other industrial o tions, the catalog features a new tery grid alloy and plastic contai

For the first time in the Exide tex line, the positive plate grid made of Silvium, Exide's patende loy of lead, silver and other m The catalog tells how the alloy's resistance to corrosion and its a to withstand overcharging inc the efficiency and service life o batteries.

The line now has transparent tainers and covers of polystyrene catalog enumerates the advantag the light-weight plastic materia sealing the cells, its resistance to and action of the electrolyte, strength, ease of cleaning and ad bility to a unique system of susp ing and positioning the elements.

Copies of the catalog can be tained from Department TC, E Industrial Division, The Ele Storage Battery Company, Box 8 Philadelphia 1, Pa., specifying F 5907.



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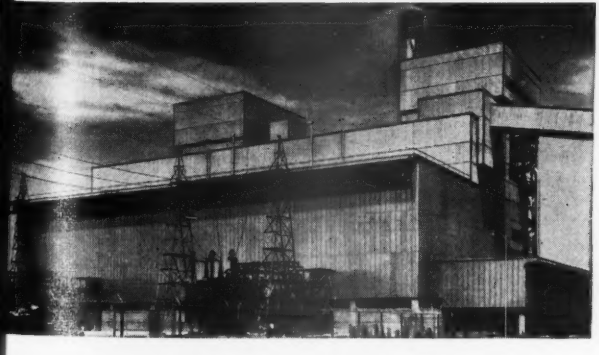
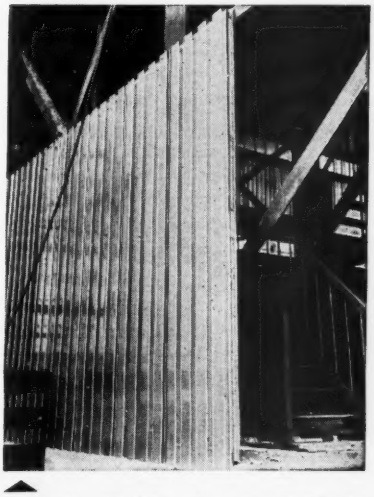
Builders of new power plants in all parts of the country have specified Q-Panel walls for the following very good reasons: 1. Q-Panels are permanent, dry and noncombustible, yet may be demounted and re-erected elsewhere to keep pace with expansion programs. 2. Q-Panels are light in weight, thus reducing the cost of framing and foundations. 3. Q-Panels have high insulation value . . . superior to a 12″ masonry wall. 4. Q-Panels are quickly installed because they are hung, not piled up. An acre of wall has been hung in 3 days. For more good reasons for using Q-Panel construction, use the coupon below and write for literature.



Q-Panel walls grace the new Elrama Power Plant (above) near Pittsburgh. It was designed by Duquesne Light Company's Engineering and Construction Department. The Dravo Corporation was General Contractor.



Q-Panel walls (above) go up quickly in any weather because they are dry and hung in place, not piled up.

More than 32,000 sq. ft. of Q-Panels were used to enclose the impressive Hawthorn Steam Electric Station (left) of the Kansas City, Missouri, Power and Light Company. Ebasco Services, Inc., designed and built the plant.

Robertson

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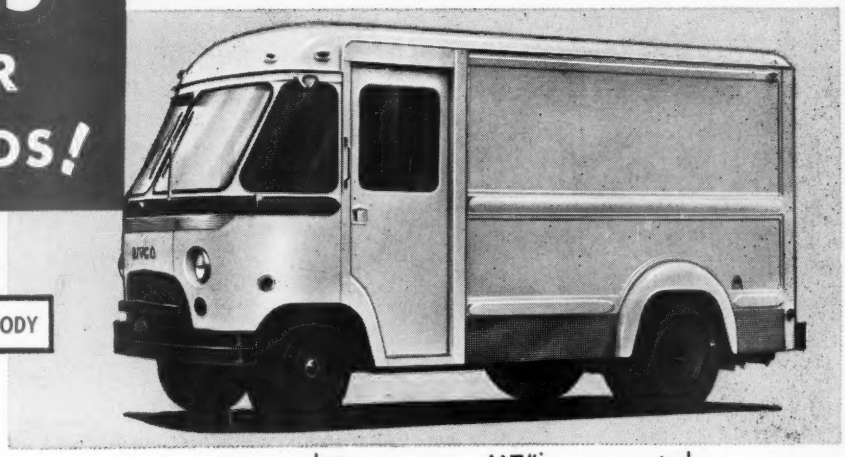

he rugged Divco "Dividend Series" Truck is now ilable in a 10′ body as well as the popular 12′ dy. A wide selection of optional features makes ber of these trucks adaptable to your specific d requirements.

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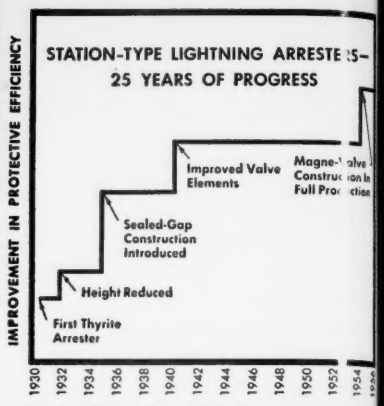
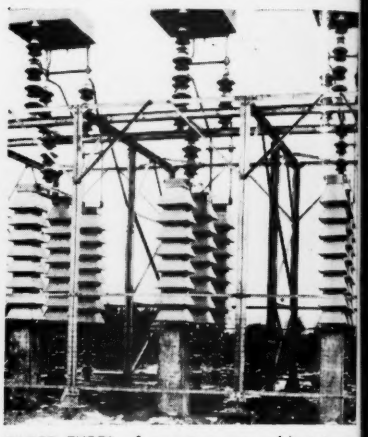
OVER 80% OF ALL DIVCO TRUCKS BUILT SINCE 1927 ARE STILL IN DAILY USE!

NEW "MAGNE-VALVE" ARRESTERS permit streamlining of power equipment protection, step up service continuity, and reduce maintenance, according to W. J. Rudge, Mgr.—Lightning Arrester & Cutout Engineering, and R. T. Morris, Mgr.—Lightning Arrester & Cutout Sales, shown here in General Electric's High Voltage Laboratory, located at Pittsfield, Mass.



CONTINUED PROGRESS by G-E engineers has resulted in five major contributions in advancement of lightning arrester protective efficiency.



OLDER TYPES of arresters are subject to appraisal by utilities when checking the protective margins of aging power apparatus, and should be replaced by modern station arresters.

Are Your Station Arresters Obsolete?

Recent advances spotlight need for critical re-evaluation

Power apparatus installed on systems prior to 1935 generally was protected with a-c electrolytic and oxide-film arresters which offered the best lightning protection at that time. Since then, in some cases, both the insulation of important power apparatus and the condition of the old arresters may have depreciated to the extent that protective margins may be reduced to the danger point. In some cases little or no protection may now be afforded to equipment.

WITH CONTINUITY OF SERVICE vitally important to the operational success of utilities, not even one outage due to inadequate protection of important apparatus can be tolerated.

Since 1920 General Electric has made rapid progress in the development of superior protective characteristics in station-type arresters. This development was climaxed in 1954 by the introduction of the Thyrite* Magne-valve arrester, which produced a 134% ***increase*** in protective levels while obtaining approximately 33% ***decrease*** in cost over 1920 equipment.

Now, old station arresters can be replaced with modern Magne-valve arresters and, because of the major improvements in protective level afforded by the Magne-valve arrester, protection can be assured on the older equipment—in many cases even better than the original protective margin. And maintenance is virtually eliminated, compared to older arresters.

IN PLANNING NEW STATIONS or in weighing major apparatus investments already in operation, perhaps now is a good time to ask "Is our lightning protection equipment adequate to assure service continuity?" Assistance in reviewing present equipment protective levels is available from your local General Electric Apparatus Sales Representative. Or write General Electric Company, Section 301-325, Schenectady 5, New York.

*Registered trade-mark of General Electric Company

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